

University of Nebraska at Omaha

# CURRICULUM VITAE

**NICHOLAS STERGIOU, PH.D.**

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[www.unomaha.edu/college-of-education/biomechanics-core-facility/index.php](http://www.unomaha.edu/college-of-education/biomechanics-core-facility/index.php)

[www.youtube.com/user/unobrb](http://www.youtube.com/user/unobrb)

[https://www.facebook.com/UNOBiomechanics/?ref=br\\_rs](https://www.facebook.com/UNOBiomechanics/?ref=br_rs)

[www.unmc.edu/publichealth//departments/enviromental/index.html](http://www.unmc.edu/publichealth//departments/enviromental/index.html)

<https://www.facebook.com/nick.stergiou.520>

## **ACADEMIC AND EMPLOYMENT HISTORY**

### **EDUCATION**

- 1995      **Ph.D.** University of Oregon, Eugene, Oregon  
 Concentration: Biomechanics; Support Areas: Motor Control, Mathematics  
 Dissertation: *Mechanisms Associated with Running Injuries* (Advisor: B.T. Bates)
- 1991      **M.S.** University of Nebraska Omaha, Omaha, Nebraska  
 Concentration: Exercise Science; Emphasis: Biomechanics  
 Thesis: *Running with running shoes versus barefoot running: a videographical analysis*  
 (Advisor: D.L. Blanke)
- 1989      **B.S.** Aristotle University of Thessaloniki, Thessaloniki, Greece  
 Major: Exercise Science and Physical Education; Minors: Special Education, Sports  
 Journalism  
 Thesis: *The Sport Shoe* (Advisor: G. Rontoyiannis)

### **ACADEMIC APPOINTMENTS**

- Present    **Assistant Dean** – Division of Biomechanics and Research Development  
 (8/2017 - Present)      University of Nebraska Omaha      Omaha, Nebraska
- Present    **Chair** – Department of Biomechanics  
 (8/2015 – Present)      University of Nebraska Omaha      Omaha, Nebraska
- Present    **Director** – Center for Research in Human Movement Variability  
 (8/2014 - Present)      University of Nebraska Omaha      Omaha, Nebraska
- Present    **Director** - Biomechanics Research Building  
 (8/2013 - Present)      University of Nebraska Omaha      Omaha, Nebraska
- Present    **Director** - Nebraska Biomechanics Core Facility  
 (8/2008 - Present)      University of Nebraska Omaha      Omaha, Nebraska
- Present    **Professor** - Department of Environmental, Agricultural and Occupational Health Sciences  
 (7/2007 - Present)      University of Nebraska Medical Center      Omaha, Nebraska
- Present    **Professor** – Department of Biomechanics  
 (8/2015 – Present)      University of Nebraska Omaha      Omaha, Nebraska
- 2015      **Professor** - School of Health, Physical Education and Recreation (HPER)  
 (8/2005 – 8/2015)      University of Nebraska Omaha      Omaha, Nebraska
- 2014      **Exercise Science Doctoral Program Chair** - School of HPER  
 (8/2011 – 8/2014)      University of Nebraska Omaha      Omaha, Nebraska
- 2014      **Director** - Center for Research in Biomechanics  
 (8/2008 – 8/2014)      University of Nebraska Omaha      Omaha, Nebraska
- 2013      **Coordinator of Research and Creative Activity** – position equivalent to Assistant Dean of  
 Research - College of Education  
 (8/2010 – 8/2013)      University of Nebraska Omaha      Omaha, Nebraska
- 2013      **Director** - School of HPER Biomechanics Laboratory

	(8/1996 – 8/2013)	University of Nebraska Omaha	Omaha, Nebraska
2012	<b>Graduate Program Chair</b> - Dept. of Environmental, Agricultural and Occupational Health		
	(8/2007 – 8/2012)	University of Nebraska Medical Center	Omaha, Nebraska
2011	<b>Chief Scientific Consultant</b> - Orthopaedic and Sports Center of Ioannina		
	(8/2000 – 8/2011)	University of Ioannina Medical Center	Ioannina, Greece
2005	<b>Associate Professor</b> - School of HPER		
	(8/2002 - 5/2005)	University of Nebraska Omaha	Omaha, Nebraska
2002	<b>Assistant Professor</b> - School of HPER		
	(8/1996 - 5/2002)	University of Nebraska Omaha	Omaha, Nebraska
1995	<b>Graduate Assistant</b> - Department of Exercise and Movement Science		
	(9/1991 - 6/1995)	University of Oregon	Eugene, Oregon
1995	<b>Instructor</b> - Service Physical Education Program		
	(9/1991 - 6/1995)	University of Oregon	Eugene, Oregon
1991	<b>Graduate Assistant</b> - School of HPER		
	(8/1989 - 5/1991)	University of Nebraska Omaha	Omaha, Nebraska

#### **OTHER EXPERIENCE**

1996	<b>Sergeant Army Infantry</b> - Mandatory Greek/NATO Army Service	
	(9/1995 - 5/1996)	Greece

## **HIGHLIGHTS**

- **RESEARCH AND ACADEMIC EXCELLENCE:** I have received the two largest research grants in the history of UNO (P20 through the NIH; \$10+ million each). I procured a private donation of \$6 million to build the 23,000 square foot Biomechanics Research Building that opened in August of 2013. I have also procured private donations of \$12 million to build a 30,000 square foot expansion to the Biomechanics Research Building, scheduled to open in the fall of 2019. I have received more than 35 million dollars in grants from NIH, NASA, NSF, the NIDRR/US Department of Education, and many other agencies and foundations.
  - I have received the first NIH K25 award in the state of Nebraska. I have mentored the first NIH K99/R00 awardee in the state of Nebraska, received by one of my previous post-docs. I have mentored the first doctoral student ever to receive the NIH F31 award working in a UNO laboratory.
  - In my role as the Coordinator of Research and Creative Activity at the College of Education (equivalent to Assistant Dean of Research), I have led my College from 44 to 69 external submissions and from 11.4 million to 23.3 million dollars within two years (2010-2012).
  - The Stanford Research Institute (SRI) provided in 2014 a report of the Biomedical Technology capabilities in Nebraska. In this report SRI stated that “The University of Nebraska Omaha is home to world class research in biomechanics.” Furthermore, Biomechanics was ranked as No. 9 (tied with Northwestern University and University of Pittsburgh) in the USA. This was the highest ranking achieved by any other biomedical technology field at UNO, UNMC, and UNL.
- **GROWTH:** I started at UNO in 1996 teaching three courses per semester and Biomechanics did not even exist as a term anywhere in the University. I used as a laboratory a small room about 900 square feet with two teaching graduate assistants as my staff. I have transformed this laboratory into the Biomechanics Research Building (BRB) with 23,000 square feet of space and more than 70 people as personnel. BRB is the first research building in the world exclusively dedicated to biomechanics research and the first building on the UNO Campus exclusively dedicated to research. It is the only space at UNO, which is leased by the Department of Veterans’ Affairs Healthcare System. The building is currently expanding by 30,000 square feet as we have outgrown the current facilities.
  - BRB is the home of the first Center in the world exclusively dedicated to research in human movement variability.
  - BRB houses the only core facility of the UNO campus, the Nebraska Biomechanics Core Facility.
  - I am the only UNO faculty that has had four post-doctoral associates every year for more than five years.
  - I have published more than 200 peer-reviewed publications and two popular textbooks in biomechanics with an H-index of 50.
- **NATIONAL AND INTERNATIONAL LINKAGES AND COLLABORATIONS:** As an international authority in the study of Nonlinear Dynamics in Biomechanics, I have been invited and have given seminars and workshops all over the world (e.g. Australia, Portugal, Spain, Ireland, Germany, England, Holland, Belgium and Greece). I have been twice a Fulbright Scholar.

- I have brought to Omaha the American Society of Biomechanics annual meeting in 2013, which is the first large scale scientific meeting to take place in our downtown convention center.
- I hold appointments and developed collaborations with various laboratories around the United States as well as the rest of the world (e.g. Ioannina Medical Center in Greece, University of North Carolina Chapel Hill, University of Michigan, University of Florida, University of Technology Sydney Australia, to name a few).
- I have had scientists and clinicians from all over the world attend the Nonlinear Analysis Workshop that is organized every year here in Omaha (e.g. Spain, Portugal, Canada, Germany, England, Australia, Japan, and many others).
- I have had the opportunity to host people from all over the world to work with my staff (e.g. Norway, Japan, Russia, Denmark, Iran, and many others).
- **DEVELOPMENT OF ACADEMIC UNITS, PROGRAMS, and DEGREES:** I have created the UNO Department of Biomechanics and the UNO Center of Research in Human Movement Variability. Both units are the first of their kind in the world. I have also created the Division of Biomechanics and Research Development which now houses the above two units and has several additional functions. I have been the only UNO faculty to serve on the University of Nebraska Medical Center Graduate Council and serve as a Chair of a Graduate Program at the University of Nebraska Medical Center. I have had a paid faculty appointment at the College of Public Health for many years and I have held adjunct faculty appointments at various Departments at the University of Nebraska Medical Center, the University of Nebraska Omaha, and the University of Nebraska Lincoln.
  - The Department of Biomechanics accounts for 25% of indirect costs for the entire University.
  - I developed PhD programs at the College of Public Health of the University of Nebraska Medical Center and the College of Engineering of the University of Nebraska Lincoln.
  - I graduated the first doctoral student from the University of Nebraska Lincoln Biomedical Engineering PhD program.
  - I have led the approval of the doctoral program in Exercise Science at UNO in 2012, which was the only approved standalone doctoral program at my University in more than ten years. I have also organized the entire program and developed the entire curriculum as the first Chair of its Doctoral Program Committee.
  - I have led the development of a BS degree in Biomechanics which is just the third such degree in the nation.
  - I have led the creation of an MS degree in Biomechanics. The innagural semester began with 20 declared students.
- **AWARDS:** I have been highlighted three times by the University of Nebraska Foundation and the University President, to our alumni and donors as an exemplary faculty with speeches at Palm Springs, California, Scottsdale, Arizona and Lincoln, Nebraska.
  - Received the UNEMED Innovator of the Year award on behalf of the Department of Biomechanics. This was the first time the award went to a Department and not an individual.
  - I received the Innovation, Development and Engagement Award (IDEA) from the University of Nebraska President's office.
  - I received the Chancellor's Medal from UNO in recognition for extraordinary service by exemplifying and sustaining excellence in my field.

- I have been the first inductee from Nebraska to the National Academy of Kinesiology, and as a Fellow to the American Institute of Biological and Medical Engineers and the American Society of Biomechanics.
- I am the only UNO faculty that received the Outstanding Teacher of the Year Award, the Outstanding Researcher of the Year Award, the Outstanding Graduate Mentor Award, and as the Director of Nebraska Biomechanics Core Facility, the Chancellor's Academic Excellence Award. I am also the only UNO faculty that is honored to participate in grant reviewing for NSF, VA, and NIH study sections as well as for many countries.
- I am the only UNO faculty with a named professorship designed specifically for him; the Distinguished Community Chair in Biomechanics. If I leave from UNO, this Chair position will be called the Stergiou Chair in Biomechanics.

## **NAMED PROFESSORSHIPS**

Distinguished Community Research Chair in Biomechanics, University of Nebraska Omaha, 2014-present.

Isaacson Chair for Research, Teaching and Creativity, University of Nebraska Omaha, 2005-2014.

## **HONORS AND AWARDS**

UNEMED Innovator of the Year Department of Biomechanics, 2018.

Innovation, Development and Engagement Award (IDEA) University of Nebraska, 2018.

Chancellor's Medal for the May 2017 Commencement, University of Nebraska Omaha, 2017.

Journal of Motor Learning and Development Excellence (JMLD) in Research Award, 2017.

American Institute for Medical and Biological Engineering (AIMBE), Inducted Fellow, 2017.

Fulbright Scholar (Diaspora Fellow), Greece, 2017.

American Society of Biomechanics, Inducted Fellow, 2017.

Fulbright Scholar, Portugal, 2016.

National Academy of Kinesiology, Inducted Member #510, 2011.

Chancellor's Strategic Planning Award for Academic Excellence, University of Nebraska Omaha, 2010.

European Workshop on Movement Science, Distinguished Scientist Lecturer, 2009.

Outstanding Research or Creative Activity Award, University of Nebraska Omaha, 2008.

Outstanding Graduate Mentor Award, University of Nebraska Omaha, 2006.

Outstanding Teaching Award, University of Nebraska Omaha, 2004.

## **VISITING AND INVITED PROFESSORSHIPS/SCHOLARSHIPS**

Fall 2018, Humboldt University of Berlin, Berlin, Germany.

Summer 2018, EuroMov, Université de Montpellier, Montpellier, France.

Fall 2017, Fulbright, Aristotle University, Thessaloniki, Greece.

Summer 2017, University of Lisbon, Portugal.

Summer 2017, Université catholique de Louvain, Belgium.

Spring 2017, Vrije Universiteit Amsterdam, Holland.

Spring 2017, King's College London, United Kingdom.

Spring 2016, University of Castelo Branco, Portugal (Fulbright).

Spring 2016, University of Extremadura, Spain.

Summer 2015, Brunel University London, United Kingdom.

Spring 2015, Palacký University of Olomouc, Czech Republic.

Spring 2014, University of Florida, USA.

Spring 2013, University College Dublin, Ireland.

Spring 2013, Interdisciplinary College of Germany in Gunne at Lake Mohne, Germany.

Spring 2012, University of Pablo de Olavide, Sevilla, Spain.

Spring 2011, University of Technology of Sydney, Australian Institute of Sport at Canberra and Victorian Institute of Sport at Melbourne, Australia.

Summer 2009, University of Lisbon, Lisbon, Portugal.

Spring 2007, Instituto de Biomecánica de Valencia, Valencia, Spain.

Spring 2005, University of Ioannina Medical Center, Ioannina, Greece.

## **OTHER AWARDS, HONORS, AND SIGNIFICANT SERVICE POSITIONS**

President Elect, American Society of Biomechanics 2019-2020

Adjunct Professor, Alexander Technological Educational Institute of Thessaloniki, 2017-present

Adjunct Professor, School of Physical Education and Sports Science, Aristotle University of Thessaloniki, 2017-present.

The 9th Olympiad of The Mind, The International S.T.E.P.S. Foundation, Invited Participant, Sept 2017.

US Department of Veterans Affairs, Rehabilitation Research and Development Service (RR&D) Aging & Neurodegenerative Diseases panel (Chair), Chair, 2014-2017.

Delaware ACCEL-CTR, External Advisory Committee Member, 2014-present.

US Department of Veterans Affairs, Rehabilitation Research and Development Service (RR&D)

Historically Black College and University Research Scientist Training Program panel, Chair, 2014-2017.

American Society of Biomechanics, Annual Meeting Chair, 2013.

American Society of Biomechanics, Education Chair, 2007-2010.

Creighton University, Professor Courtesy Appointment Dept. of Physical Therapy, 2006-present.

National Institutes of Health, Mentored Quantitative Research Development Award, 2005.

University of Nebraska Medical Center, Professor Courtesy Appointment Dept. of Pediatrics, 2005.

University of Nebraska Medical Center, Professor Courtesy Appointment Dept. of Surgery, 2005

University of Nebraska Omaha, Professor Courtesy Appointment Psychology Dept, 2001.

University of Nebraska, Faculty Fellow Award, 1999.

Golden Key National Honor Society, Honorary Member, 1998.

Graduate Teaching Fellowship, University of Oregon, 1991 - 1995.

University of Nebraska at Omaha Physical Education Outstanding Graduate Student, 1991.

University of Nebraska at Omaha, Graduate Assistantship, 1989 - 1991.

Aristotle University of Thessaloniki, Graduated with Highest Honors, 1989.



## **SOCIETIES AND MEMBERSHIPS**

**Editorial Board:** Physical Therapy Journal, Annals of Biomedical Engineering, Journal of Biomechanics, Knee Surgery Sports Arthrology and Traumatology, Frontiers in Physiology-Fractal Physiology, Revista Andaluzade Medicina del Deporte, Journal of Physical Activity Nutrition & Rehabilitation

**Memberships:** American Society of Biomechanics, International Society of Biomechanics, European Society of Biomechanics, American Association for the Advancement of Science, Society for Neuroscience, American College of Sports Medicine, North American Society for the Psychology of Sport and Physical Activity, International Society of Posture and Gait Research, Gait and Clinical Movement Analysis Society, International Society for Infant Studies, Society for Chaos Theory in Psychology & Life Sciences, International Society of Motor Control, Nebraska Academy of Sciences, SHAPE America the Society of Health and Physical Educators, American Alliance for Health, Physical Education, Recreation, and Dance, National Academy of Kinesiology, American Institute for Medical and Biological Engineering.

## **REVIEWER**

### **Grant Reviewer and Grant Review Panels:**

**NIH: NICHD** Small Business Innovation Research/Small Business Technology Transfer (R41/R42/R43/R44) Review, Panel ZRG1 MOSS V15 Study Section Meeting; NICHD Special Emphasis Biomechanical Modeling of Movement, MRS/Musculoskeletal Rehabilitation Sciences Study Section; NIDDK Special Emphasis Type 1 Diabetes Impact Award, NIBIB ZEB1 OSR-F (J1) Special Emphasis Panel Training Applications; NIA Scientific Review Group Translational Research in Aging Panel; NIAMS Special Emphasis Panel Musculoskeletal, Oral and Skin Sciences Special Emphasis Panel ZRG1 MOSS-C

**NSF:** Emerging Frontiers in Research and Innovation-Mind Machines and Motor Control panel, NSF Major Research Instrumentation competition panel, CAREER Competition panel,

**VA:** Rehabilitation Research and Development Service (RR&D) SPIRE panel, Rehabilitation Research and Development Service (RR&D) Aging & Neurodegenerative Diseases panel, Rehabilitation Research and Development Service (RR&D) Historically Black College and University Research Scientist Training Program panel (Chair), Rehabilitation Research and Development Service (RR&D) Aging & Neurodegenerative Diseases panel (Chair),

**US Dept of Education:** NIDRR Field Initiated Proposals

**Other:** Army Medical Research and Material Command (MRMC), Thrasher Research Fund, Invention Center Washington State University, American Association for the Advancement of Science (AAAS) Research Competitiveness Program

**International:** Swiss National Science Foundation, Austrian Science Fund, The Government of the Hong Kong Health and Medical Research Fund, Icelandic Research Fund, Hellenic Quality Assurance Agency of Higher Education External Evaluation process of University Departments in Greece, Romanian National Council for the Development and Innovation, State Scholarships Foundation Greece, Programs Thalís & Archimedes Life Long Learning and Religious Affairs Greece, Health Research Council of New Zealand, Natural Science and Engineering Research Council of Canada (NSERC), Ontario Ministry of Labour Research Opportunities Program, The French National Research Agency

**Journal Reviewer:**

Annals of Biomedical Engineering, Fluctuation and Noise Letters, International Journal of Bifurcation and Chaos, Computers in Biology and Medicine, Experimental Brain Research, Gait and Posture, Human Movement Science, Journal for the Royal Society Interface, Neuroscience, Journal of Neurophysiology, Plos One, Neuroscience Letters, Journal of Sports Sciences, European Journal of Applied Physiology, IEEE Transactions on Biomedical Engineering, Journal of Gerontology: Psychological Sciences, Journal of Biomechanics, Ergonomics, Knee Surgery Sports Traumatology Arthroscopy, Clinical Biomechanics, Archives of Physical Medicine and Rehabilitation, Footwear Science, Frontiers Physiology, Journal of Applied Biomechanics, Journal of Motor Behavior, Journal of Neuroengineering and Rehabilitation, Nature Reviews, Science, Sports Medicine, Medical Engineering & Physics, Motor Control, Obesity, Physical Therapy, Transactions on Occupational Ergonomics and Human Factors, Behavior Research Methods, Experimental Aging Research, Journal of Biomedical Engineering, Journal of Sports Science & Medicine, Simulation in Healthcare, Applied Ergonomics, Journal of Athletic Training, Journal of Neurologic Physical Therapy, Journal of Sports Medicine and Physical Fitness, Medicine & Science in Sports & Exercise, Sports Biomechanics, Clinical Anatomy, Experimental Neurology, International Journal of Sport Psychology, Journal of Theoretical Biology, Medical and Biological Engineering and Computing, Child Development, Complexity, International SportMed Journal, Research Quarterly for Exercise and Science, British Journal of Sports Medicine, International Journal of Medical Sciences, Behavioral Brain Research, Entropy.

## **GRANTS AND CONTRACTS**

### **RESEARCH RELATED GRANTS**

- 1) An interdisciplinary examination of human movement variability. Summer Fellowship. Grantor: University Committee on Research. 1997, \$6,000, Role: PI.
- 2) Physiological effects of whey protein on muscular fitness and body composition. Grantor: Next Nutrition, Carlsbad, California. 1997-1998, \$63,484, Role: Co-PI.
- 3) Stair-step platform and force plates for gait analysis. Grantor: John A. Wiebe Jr., Children's Health Care Fund. 2000, \$53,070, Role: Co-PI.
- 4) Performer variability during locomotion. Summer Fellowship. Grantor: University Committee on Research. 2000, \$3,000, Role: PI.
- 5) MEC High Speed Imaging System. Grantor: University of Nebraska Foundation. 2002, \$36,500, Role: PI.
- 6) Graduate Assistant for Research Collaboration between HPER Biomechanics Laboratory and UNMC Minimally Invasive and Computer Assisted Surgery. Grantor: UNMC Minimally Invasive and Computer Assisted Surgery. 2004-2005, \$7,500, Role: PI.
- 7) Investigation of the Dynamics of Development of Sitting Postural Control in Infants with Cerebral Palsy. Grantor: U.S. Department of Education, National Institute of Disability and Rehabilitation, Field Initiated Project-Research. 2004-2007, \$450,000, Role: PI.
- 8) A Biomedical Device for Prognostic and Diagnostic Measures of Pathological Locomotive Bio-Rhythms. Grantor: Nebraska Research Initiative. 2004-2008, \$383,917, Role: PI.
- 9) New Robotic Surgical Tools for Minimal Access Surgery. Grantor: Nebraska Research Initiative. 2004-2008, \$1,185,852, Role: Co-PI.
- 10) Biomechanics Lab Camera System: Motion Analysis System with Orthotrak software and a six camera Eagle Digital Camera System. Grantor: University of Nebraska Foundation. 2005, \$139,600, Role: PI.
- 11) Nonlinear Analysis of Postural Function in Infants. Grantor: National Institutes of Health, Subdivision: National Institute of Child Health Development Center: National Center of Medical Rehabilitation Research. 2005-2010, (K25HD047194), \$577,182, Role: PI.
- 12) Walking Activity and the Burden of Multiple Morbidities. Grantor: National Institute on Aging, 2005-2006, R21 AG027072-01), \$131,000, Role: Paid-Consultant.
- 13) Center for Advanced Surgical Technology. Grantor: UNMC. 2005-2008, \$769,698, Role: Co-Investigator.
- 14) Evaluation of Gait Abnormalities in Geriatric Patients Induced by Peripheral Arterial Disease Utilizing Advanced Biomedical Measures. Grantor: The American Geriatrics Society. 2006-2008, \$150,000, Role: Mentor/Co-Investigator.
- 15) Child's Physical Activity/Cancer Prevention Video Game. Grantor: National Institutes of Health. 2006-2007, (R43CA117581) \$81,000, Role: Paid-Consultant.
- 16) Impact of Resistance Training on Balance in Multiple Sclerosis Patients. Grantor: The MARS Foundation. 2007-2010, \$100,000, Role: Co-PI.
- 17) The Nebraska Biomechanics Core Facility: An Emerging Core Facility. Grantor: Nebraska Research Initiative. 2007-2009, \$621,980, Role: PI.

- 18) Biomechanics Lab Software and Equipment Upgrade. Grantor: University of Nebraska Foundation. 2007, \$150,000, Role: PI.
- 19) Investigation of Interventions for Sitting Postural Control in Young Children with Moderate to Severe Cerebral Palsy. Grantor: U.S. Department of Education, National Institute of Disability and Rehabilitation. Field Initiated Project-Research, 2008-2012, \$600,000, Role: PI.
- 20) Does Early Postural Intervention Affect Sitting Balance or Reaching in Infants Born Preterm? Grantor: American Physical Therapy Association, Section on Pediatrics Planning Grant. 2009-2010, \$30,000, Role: Co-PI.
- 21) The use of virtual simulations and robotic manipulators for the improvement of robotic surgical educational training. Grantor: Nebraska Research Initiative. 2009-2011, \$681,057, Role: Co-PI.
- 22) Bioengineering a Medical Device for the Evaluation of Sitting Posture in Infants with Motor Disabilities. Grantor: Nebraska Research Initiative. 2009-2011, \$453,863, Role: PI.
- 23) A Novel Wireless Mobility Monitoring System. Grantor: Nebraska Research Initiative. 2009-2011, \$538,000, Role: Co-PI.
- 24) Wii Fit for Improving Activity, Gait and Balance in Alzheimer's Dementia. Grantor: Alzheimer's Association. 2009-2010, \$30,000, Role: Co-Investigator.
- 25) The Effect of Physiological Mechanisms on Muscular Strength and Skeletal Muscle Performance. Grantor: NASA Nebraska Space Grant and EPSCoR. 2010, \$33,995, Role: PI.
- 26) Systemic Inflammation and Gait in Older Adults with COPD. Grantor: UNMC Center for Clinical and Translational Research Grant. 2009-2012, \$19,835, Role: Co-PI.
- 27) Mitochondrial Dysfunction and Oxidative Damage as Determinants of Limb Dysfunction in Claudicating Patients. Grantor: National Institutes of Health/National Institute on Aging. 2010-2015, (R01AG034995) \$3,566,106.00, Role: Co-PI.
- 28) The Role of Tactile Sensation on Locomotor Adaptation in Astronauts Returning from Long Duration Space Flights. Grantor: NASA EPSCoR. 2011-2014, \$750,000, Role: PI
- 29) Sensory Interaction in Patients with Benign Paroxysmal Postional Vertigo during Locomotion in Space. Grantor: NASA Nebraska Space Grant & EPSCoR. 2011-2012, \$30,000, Role: PI.
- 30) MRI: Acquisition of ETG-4000 24 Channel Optical Topography System for research, training and outreach activities. Grantor: National Science Foundation. 2012-2015, \$233,367 Role: PI.
- 31) Standalone integrated manipulator for portable learning and surgical education. Grantor: Nebraska Research Initiative, 2012-2014, \$100,000. Role: Paid Consultant.
- 32) A US-Ireland partnership to promote research in the area of ICT and health. Grantor: University of Nebraska at Omaha Faculty Research International Award, 2012, \$5,000. Role: PI.
- 33) Development of a Low Back Machine. Grantor: Creighton University Physical Therapy Department, 2012-2013, \$21,500. Role: PI.
- 34) The effectiveness of post-stroke gait recovery from retraining regimes using real-time kinematic biofeedback applications. Grantor: Victoria University Researcher Development, 2013, \$26,720. Role: Co-Investigator.
- 35) Perception and production of complex movement variability in children with autism. Grantor: Autism Speaks, 2010-2013, \$56,000. Role: Mentor.
- 36) 37<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Grantor: Institutes of Health. 2013, (R13EB017089), \$18,750. Role: PI.

- 37) American Society of Biomechanics Annual Conference 2013. Grantor: NASA Nebraska Space Grant, 2013, \$7800. Role: PI.
- 38) Novel Assistive Locomotor Tool for Gait Rehabilitation in Elderly. Grantor: NASA Nebraska Space Grant and EPSCoR, 2013, \$17,250. Role: Co-Investigator.
- 39) Development of a Low Back Machine. Grantor: Creighton University Physical Therapy Department, 2013-2014, \$25,521. Role: PI.
- 40) A US-Greece partnership to promote research in Biomechanics and Motor Control. Grantor: University of Nebraska at Omaha Faculty Research International Award, 2013, \$5,000.00, Role: PI.
- 41) Equipment for the Biomechanics Research Building. Grantor: Nebraska Research Initiative, 2013-2014, \$843,005. Role: PI.
- 42) Support of my post-doc Dr. Steven Harrison via a subaward under Dr. Michael Richardson's NIH grant entitled, "Modeling the Behavioral Dynamics of Social Action and Coordination". Grantor: University of Cincinnati, 2013-2018, \$50,691. Role: UNO-PI.
- 43) A USA-Czech partnership to promote research in the area of gait analysis. Grantor: University of Nebraska at Omaha Faculty Research International Award, 2014, \$5,000.00, Role: PI.
- 44) Harnessing Movement Variability to Treat and Prevent Motor Related Disorder. Grantor: National Institutes of Health/National Institute of General Medical Sciences, 2014-2019, (P20GM109090) \$10,088,409.00, Role: PI.
- 45) Enhancing the prosthetic interface: 1/f vibrotactile socket stimulation to improve the adaptability of trans-tibial amputees. Grantor: NIH/NICHD 2015-2018, (R15HD086828) \$425,398.00, Role: PI.
- 46) Dynamic supported mobility for infants and toddlers with cerebral palsy. Grantor: National Institute on Disability and Rehabilitation Research Field-Initiated Program, 2015-2017, \$600,000.00, Role: Paid-Consultant.
- 47) Multisegmental Sensor Integration for Balance Control. Grantor: Engineering Acoustics, Inc., Subaward for US Department of Defense US Army/SBIR Phase II, 2016-2017, \$100,000.00, Role: UNO-PI.
- 48) Predictions of Driver Safety in Advancing Age: Real-World Recorders. Grantor: National Institutes of Health and National Institute of Aging, R01AG017177-13, 2016-2018, \$59,907, Role: UNO-PI.
- 49) Driving Safety and Real-Time Glucose Monitoring in Insulin-Dependent Diabetes. Grantor: Toyota Motor Engineering and Manufacturing North America, 2016-2017, \$10,510, Role: UNO-PI.
- 50) Acquisition of OBJECT260 Connex3 for Research, Training and Outreach Activities. Grantor: NE EPSCoR Major Research Instrumentation (MRI) Program, 2016-2017, \$190,095, Role: Co-PI.
- 51) Great Plains IDEA-CTR. Grantor: National Institutes of Health and National Institute of General Medical Sciences, 1U54GM115458-01, 2016-2018, \$125,154. Role- Co-Investigator.
- 52) An analysis of localized muscle fatigue, i-beam surface coating, and harness and tool belt on gait stability for steel erection. Grantor: UN Collaborative Initiative System Science Team Strengthening Grant, 2017-2019, \$300,000, Role: Co-PI.
- 53) Cerebral microhemorrhages and gait dysfunction in aging, NIH 1R01AG055395-01, 2017-2022, \$303,400, Role: Consultant.

- 54) Assessing the relationship between visual field defect and driving performance in glaucoma, UNMC (D. Ghate, Ophthalmology and Cvisual Sciences) 2017-2018, \$8,248, CTR Pilot, Role: PI.
- 55) Driving Safety and Real-Time Glucose Monitoring in Insulin-Dependent Diabetes. Grantor: Toyota Motor Engineering and Manufacturing North America, 2018-2021, \$23,095, Role: UNO-PI.
- 56) Kinematics of CPR, Zoll. Grantor: Zoll Medical Corporation, 2018-2019, \$75,466, Role: PI
- 57) Driving Performance and Safety in Rheumatoid Arthritis, 2018-2019, \$13,578, UNMC, Role: UNO-PI.
- 58) Harnessing Movement Variability to Treat and Prevent Motor Related Disorder. Grantor: National Institutes of Health/National Institute of General Medical Sciences, 2019-2024, (P20GM109090) \$10,392,394.00, Role: PI.

**TOTAL AMOUNT OF MONEY AWARDED FOR RESEARCH RELATED GRANTS: \$36,065,647.00**

**GRANTS WITH THE ORTHOPAEDIC SPORTS MEDICINE CENTER OF IOANNINA - GREECE**

- 1) Program for the Support of New Research. Grantor: General Secretary of Research and Technology of Greece. 2005-2006. €132,720. Role: Co-PI.
- 2) Biomechanical evaluation of the effect of an ACL reconstruction using a double-bundle technique on the knee function. Grantor: Hellenic Society of Orthopedic Surgery and Traumatology. 2006-2007. €20,000. Role: Co-PI.
- 3) Improvement of State Research Domains. Grantor: General Secretary of Research and Technology of Greece. 2006-2007. €153,401. Role: Co-PI.
- 4) Biomechanical analysis of the function of the knee in healthy females, in ACL deficient females and in females with ACL reconstruction at different phases of their menstrual cycle. Grantor: Hellenic Society of Orthopedic Surgery and Traumatology. 2007. €20,000. Role: Co-PI.

**TOTAL AMOUNT OF MONEY AWARDED FOR RESEARCH IN GREECE: €326,121.00**

**TEACHING RELATED GRANTS**

- 1) Material and Equipment proposal. Academic Year: 1996-1997. Grantor: Peter Kiewit Foundation and AT&T, in conjunction with the Center for Faculty Development. Amount of grant: \$539.80.
- 2) Evaluation of different instructional tools used in Anatomy and Physiology. Summer, 1999. Grantor: University Committee for the Advancement of Teaching. Product: Report and presentation at the Center of Faculty Development. Amount of grant: \$2,500.00.
- 3) Computerizing PE 2880 (Anatomy and Physiology). Academic Year: 1998-1999. Grantor: UNO Chancellor's Indirect Funds. Product: The HPER Computer Lab. Amount of grant: \$14,500.00.
- 4) Y2K Upgrades for the Biomechanics Laboratory. Academic Year: 1999-2000. Grantor: University of Nebraska and the Information Technology Services. Product: Upgrade components of the HPER Biomechanics Lab. Amount of the grant: \$6,000.00.
- 5) Custom Palm Pilot software for the pre-service teacher. Summer, 2003. Grantor: Nebraska Catalyst Project, Year III. Amount of grant: \$2,950.00.

**TOTAL AMOUNT OF MONEY AWARDED FOR TEACHING RELATED GRANTS: \$26,489.00**

**GRAND TOTAL OF ALL GRANTS AWARDED: \$ 25,725,863.00**

**INVENTIONS RELATED TO FIELD OF EXPERIENCE**

**AWARDED PATENTS**

1. Patent No. US 9,179,862 B2 “Method and system for assessing locomotive bio-rhythms”  
Publication date: Nov 10, 2015.

**INVENTIONS IN PROCESS**

1. New Invention Notification: Pink Noise Driven Activity Monitor
2. New Invention Notification: System and Method for Identification of Brain Injury
3. System and Methods for Identifying and Measuring Individuals with Autism Spectrum Disorder, Docket No.: 15006P, Serial No.: 62/309,185, Filing Date: 03/16/2016.
4. Wearable, Remote Monitoring Device for Locomotor-Respiratory Coupling
5. A Medical Device for the Evaluation of Sitting Postural in Infants with Motor Disabilities.
6. System and Method of Remote Diagnosis of Neurophysical Impairments.
7. Gait Variability is altered in Older Adults When Listening to Auditory Stimuli with Differing Temporal Structures.
8. Magnetically Silent Joystick for Rehabilitation of Neurological Disorder.
9. Indifference to Chaotic Motion may be related to Social Disinterest in Children with Autism.
10. Virtual Robot Assisted Minimally Invasive Training Simulator.
11. Energy Capture Ankle Foot Orthosis.
12. Neurosensory Organization Locomotor (NEurOL Testing System)
13. Method to Determine Subclinical Neurological Deficits in Hand Function

## **PUBLICATIONS**

### **Summary**

Publications have been cited 11,070 times and H-index is 52 according to the Google Scholar database.

### **Peer Reviewed Published Journal Articles (N = 228)**

- 1) Groff BR, Antonellis P, Schmid KK, Knarr BA, **Stergiou N.** (In Press). Stride-time variability is related to sensorimotor cortical activation during forward and backward walking. *Neuroscience Letters*.
- 2) Huang CK, Shivaswamy V, Thaisethawatkul P, Mack L, **Stergiou N**, Siu KC. (In Press). An altered spatiotemporal gait adjustment during a virtual obstacle crossing task in patients with diabetic peripheral neuropathy. *Journal of Diabetes Complications*.
- 3) Raffalt PC, Kent JA, Wurdeman SR, **Stergiou N.** (In Press). Selection Procedures for the Largest Lyapunov Exponent in Gait Biomechanics. *Annals in Biomedical Engineering*.
- 4) Kent JA, Takahashi KZ, **Stergiou N.** (In Press). Uneven terrain exacerbates the deficits of a passive prosthesis in the regulation of whole body angular momentum in individuals with a unilateral transtibial amputation. *Journal of Neuroengineering and Rehabilitation*.
- 5) Vaz JR, Groff BR, Rowen DA, Knarr BA, **Stergiou N.** (In Press). Synchronization dynamics modulates stride-to-stride fluctuations when walking to an invariant but not to a fractal-like stimulus. *Neuroscience Letters*.
- 6) Harrison SJ, Hough M, Schmid K, Groff BR, **Stergiou N.** (2018). When Coordinating Finger Tapping to a Variable Beat the Variability Scaling Structure of the Movement and the Cortical BOLD Signal Are Both Entrained to the Auditory Stimuli. *Neuroscience*. Nov 10;392:203-218. doi: 10.1016/j.neuroscience.2018.06.025.
- 7) Lanier AS, Knarr BA, **Stergiou N**, Buchanan TS. (2018). A Novel and Safe Approach to Simulate Cutting Movements Using Ground Reaction Forces. *Sensors (Basel)*. Aug 11;18(8). pii: E2631. doi: 10.3390/s18082631.
- 8) Rock CG, Wurdeman SR, **Stergiou N**, Takahashi KZ. (2018). Stride-to-stride fluctuations in transtibial amputees are not affected by changes in push-off mechanics from using different prostheses. *PLoS One*. Oct 3;13(10):e0205098. doi: 10.1371/journal.pone.0205098.
- 9) Haworth J, **Stergiou N.** (2018). Orderliness of Visual Stimulus Motion Mediates Sensorimotor Coordination. *Frontiers in Physiology*. Oct 11;9:1441. doi: 10.3389/fphys.2018.01441.
- 10) Kyvelidou A, **Stergiou N.** (2018). Visual and somatosensory contributions to infant sitting postural control. *Somatosensory & Motor Research*. Dec 28;1-7. doi: 10.1080/08990220.2018.1551203
- 11) Raffalt PC, Vallabhajosula S, Renz JJ, Mukherjee M, **Stergiou N.** (2018). Lower limb joint angle variability and dimensionality are different in stairmill climbing and treadmill walking. *Royal Society Open Science*. Dec 12;5(12):180996. doi: 10.1098/rsos.180996.
- 12) Groff, B. R., Antonellis, P., Schmid, K. K., Knarr, B. A., & **Stergiou, N.** (2018). Stride-time variability is related to sensorimotor cortical activation during forward and backward walking. *Neuroscience Letters*, Oct 24;692:150-158.
- 13) Harrison, S. J., Hough, M., Schmid, K., Groff, B. R., & **Stergiou, N.** (2018). When Coordinating Finger Tapping to a Variable Beat the Variability Scaling Structure of the Movement and the Cortical BOLD Signal Are Both Entrained to the Auditory Stimuli. *Neuroscience*, 392, 203-218.



- 14) Haworth, J., & **Stergiou, N.** (2018). Orderliness of visual stimulus motion mediates sensorimotor coordination. *Frontiers in physiology*, Oct 11;9:1441
- 15) Huang, C. K., Shivaswamy, V., Thaisethhawatkul, P., Mack, L., **Stergiou, N.**, & Siu, K. C. (2018). An altered spatiotemporal gait adjustment during a virtual obstacle crossing task in patients with diabetic peripheral neuropathy. *Journal of Diabetes and its Complications*, S1056-8727(18)30746-3.
- 16) Lanier, A., Knarr, B., **Stergiou, N.**, & Buchanan, T. (2018). A Novel and Safe Approach to Simulate Cutting Movements Using Ground Reaction Forces. *Sensors*, 18(8), 2631.
- 17) Rock, C. G., Wurdeman, S. R., **Stergiou, N.**, & Takahashi, K. Z. (2018). Stride-to-stride fluctuations in transtibial amputees are not affected by changes in push-off mechanics from using different prostheses. *PloS One*, Oct 3;13(10):e0205098.
- 18) Kokkoni, E. Haworth, J.L., Harbourne, R. T., **Stergiou, N.**, Kyvelidou, A. (2017). Infant sitting appears robust against changes in surface context. *Somatosensory & Motor Research*. Dec;34(4):265-272.
- 19) Wurdeman SR, Raffalt PC, **Stergiou N.** (2017). Reduced vertical displacement of the center of mass is not accompanied by reduced oxygen uptake during walking. *Nature Scientific Reports*. Dec 7;7(1):17182.
- 20) Zuniga JM, Peck JL, Srivastava R, Pierce JE, Dudley DR, Than NA, **Stergiou N.** (2017). Functional changes through the usage of 3D-printed transitional prostheses in children. *Disability Rehabilitation Assistive Technology*. Nov 8:1-7.
- 21) Raffalt PC, Vallabhajosula S, Renz JJ, Mukherjee M, **Stergiou N.** (2017). Dynamics of Stride Interval Characteristics during Continuous Stairmill Climbing. *Frontiers in Physiology*. Aug 23;8:609.
- 22) Cavanaugh JT, Kelty-Stephen DG, **Stergiou N.** (2017). Multifractality, Interactivity, and the Adaptive Capacity of the Human Movement System: A Perspective for Advancing the Conceptual Basis of Neurologic Physical Therapy. *Journal of Neurologic Physical Therapy*. Oct;41(4):245-251.
- 23) Kent JA, **Stergiou N**, Wurdeman SR. (2017). Dynamic balance changes within three weeks of fitting a new prosthetic foot component. *Gait Posture*. Jul 5;58:23-29.
- 24) Schieber MN, Hasenkamp RM, Pipinos II, Johanning JM, **Stergiou N**, DeSpiegelaere HK, Chien JH, Myers SA. (2017). Muscle strength and control characteristics are altered by peripheral artery disease. *Journal of Vascular Surgery*. Jul;66(1):178-186.
- 25) Sotirakis H, Kyvelidou A, **Stergiou N**, Hatzitaki V. (2017). Posture and gaze tracking of a vertically moving target reveals age-related constraints in visuo-motor coupling. *Neuroscience Letters*. Jul 27;654:12-16.
- 26) Wickstrom J, **Stergiou N**, Kyvelidou A. (2017). Reliability of center of pressure measures for assessing the development of sitting postural control through the stages of sitting. *Gait Posture*. 2017 Jul;56:8-13.
- 27) Kyvelidou A, Harbourne RT, Haworth J, Schmid KK, **Stergiou N.** (2017). Children with moderate to severe cerebral palsy may not benefit from stochastic vibration when developing independent sitting. *Developmental Neurorehabilitation*. Mar 9:1-9.
- 28) Yentes JM, Rennard SI, Schmid KK, Blanke D, **Stergiou N.** (2017). Patients with COPD walk with altered step time and step width variability as compared to healthy controls. *Annals of the American Thoracic Society*. Jun;14(6):858-866.
- 29) Chien JH, Mukherjee M, Kent J, **Stergiou N.** (2017). Mastoid vibration affects dynamic postural control during gait in healthy older adults. *Nature Scientific Reports*. Jan 27;7:41547.

- 30) Sethi A, **Stergiou N**, Patterson TS, Patten C, Richards LG. (2017). Speed and Rhythm Affect Temporal Structure of Variability in Reaching Poststroke: A Pilot Study. *Journal of Motor Behavior*. Jan-Feb;49(1):35-45.
- 31) Wurdeman SR, Schmid KK, Myers SA, Jacobsen AL, **Stergiou N**. (2017). Step Activity and 6-Minute Walk Test Outcomes When Wearing Low-Activity or High-Activity Prosthetic Feet. *American Journal of Physical Medicine and Rehabilitation*. May;96(5):294-300.
- 32) Walter H, Wagman JB, **Stergiou N**, Erkmén N, Stoffregen TA. (2017). Dynamic perception of dynamic affordances: walking on a ship at sea. *Experimental Brain Research*. Feb;235(2):517-524.
- 33) Sotirakis H, Kyvelidou A, Mademli L, **Stergiou N**, Hatzitaki V. (2016). Aging affects postural tracking of complex visual motion cues. *Experimental Brain Research*. Sep;234(9):2529-40.
- 34) Haworth J, Kyvelidou A, Fisher W, **Stergiou N**. (2016). Indifference to Chaotic Motion May Be Related to Social Disinterest in Children With Autism. *Journal of Motor Learning and Development*. Dec;4(2):219-235.
- 35) Munafo J, Wade MG, **Stergiou N**, Stoffregen TA. (2016). The Rim and the Ancient Mariner: The Nautical Horizon Affects Postural Sway in Older Adults. *PLoS One*. Dec 14;11(12):e0166900.
- 36) Klugarova J, Janura M, Svoboda Z, Sos Z, **Stergiou N**, Klugar M. (2016). Hallux valgus surgery affects kinematic parameters during gait. *Clinical Biomechanics*. Dec;40:20-26.
- 37) Decker LM, Cignetti F, Hunt N, Potter JF, **Stergiou N**, Studenski SA. (2016). Effects of aging on the relationship between cognitive demand and step variability during dual-task walking. *Age (Dordr)*. Aug;38(4):363-375.
- 38) Spiropoulos E, Kyvelidou A, **Stergiou N**, Athanassiou G. (2016). Quantifying muscle fatigue of the trunk during repetitive load lifting using Lyapunov analysis. *Journal of Ergonomics*. 6:180.
- 39) Chien JH, Mukherjee M, **Stergiou N**. (2016). Mastoid Vibration Affects Dynamic Postural Control during Gait. *Annals in Biomedical Engineering*. Sep;44(9):2774-84.
- 40) Chien JH, Mukherjee M, Siu KC, **Stergiou N**. (2016). Locomotor Sensory Organization Test: How Sensory Conflict Affects the Temporal Structure of Sway Variability During Gait. *Annals in Biomedical Engineering*. May;44(5):1625-35.
- 41) Eikema DJ, Chien JH, **Stergiou N**, Myers SA, Scott-Pandorf MM, Bloomberg JJ, Mukherjee M. (2016). Optic flow improves adaptability of spatiotemporal characteristics during split-belt locomotor adaptation with tactile stimulation. *Experimental Brain Research*. Feb;234(2):511-22.
- 42) Ryalls BO, Harbourne R, Kelly-Vance L, Wickstrom J, **Stergiou N**, Kyvelidou A. (2016). A Perceptual Motor Intervention Improves Play Behavior in Children with Moderate to Severe Cerebral Palsy. *Frontiers in Psychology*. May 3;7:643.
- 43) Chien JH, Yentes J, **Stergiou N**, Siu KC. (2015). The Effect of Walking Speed on Gait Variability in Healthy Young, Middle-aged and Elderly Individuals. *Journal of Physical Activity, Nutrition & Rehabilitation*. May 14:1166
- 44) **Stergiou N**, Kent JA, McGrath D. (2015). Human Movement Variability and Aging. *Kinesiology Review*. 5:15 – 22.
- 45) Kent JA, **Stergiou N**, Wurdeman SR. (2015). Step activity and stride-to-stride fluctuations are negatively correlated in individuals with transtibial amputation. *Clinical Biomechanics*. 30(10):1225-9.
- 46) Mukherjee M, Eikema DJ, Chien JH, Myers SA, Scott-Pandorf M, Bloomberg JJ, **Stergiou N**. (2015). Plantar tactile perturbations enhance transfer of split-belt locomotor adaptation. *Experimental Brain Research*. 233(10):3005-12.

- 47) Yentes JM, Schmid KK, Blanke D, Romberger DJ, Rennard RI, **Stergiou N.** (2015). Gait mechanics in patients with chronic obstructive pulmonary disease. *Respiratory Research*. Feb 28;16:31.
- 48) Haworth JL, Kyvelidou A, Fisher W, **Stergiou N.** (2015). Children's looking preference for biological motion may be related to an affinity for mathematical chaos. *Frontiers in Psychology*. Mar;17;6:281.
- 49) Munafo J, Wade MG, **Stergiou N**, Stoffregen TA. (2015). Subjective reports and postural performance among older adult passengers on a sea voyage. *Ecological Psychology*. 27(2):127-143.
- 50) Hatzitaki V, Kyvelidou A, Sofianidis G, **Stergiou N.** (2015). Postural sway and gaze can track the complex motion of a visual target. *PLoS One*. 16;10(3):e0119828.
- 51) Vallabhajosula S, Tan CW, Mukherjee M, Davidson AJ, **Stergiou N.** (2015). Biomechanical Analyses of Stair-climbing while Dual-tasking. *Journal of Biomechanics*. 48(6):921-9.
- 52) Haaland E, Kaipust J, Wang Y, **Stergiou N**, Stoffregen TA. (2015). Human gait at sea while walking fore-aft versus athwart. *Aerospace Medicine and Human Performance*. 86(5):435-9.
- 53) Chang CH, **Stergiou N**, Kaipust J, Haaland E, Wang Y, Chen FC, Stoffregen TA. (2015). Walking Before and During a Sea Voyage. *Ecological Psychology*. 27(1):87-101.
- 54) Harrison SJ, **Stergiou N.** (2015). Complex Adaptive Behavior and Dexterous Action. *Nonlinear Dynamics, Psychology, and Life Sciences*. 19(4):345-94.
- 55) Surkar SM, Edelbrock C, **Stergiou N**, Berger S, Harbourne RT. (2015). Sitting postural control affects the development of focused attention in children with cerebral palsy. *Pediatric Physical Therapy*. 27(1):16-22.
- 56) Chien JC, Eikema DJ, Mukherjee J, **Stergiou N.** (2014). Locomotor Sensory Organization Test: a novel paradigm for the assessment of sensory contributions of gait. *Annals of Biomedical Engineering*. Dec;42(12):2512-23.
- 57) Yentes JM, Blanke D, Rennard SI, **Stergiou N.** (2014). The effect of a short duration, high intensity exercise intervention on gait biomechanics in patients with COPD: findings from a pilot study. *Journal of the COPD Foundation*. 1(1):133-147.
- 58) Hunt N, McGrath D, **Stergiou N.** (2014). The influence of auditory-motor coupling on fractal dynamics in human gait. *Nature Scientific Reports*. Aug;4:5879.
- 59) Haworth JL, Vallabhajosula S, **Stergiou N.** (2014). Gaze and posture coordinate differently with the complexity of visual stimulus motion. *Experimental Brain Research*. Sep;232(9):2797-806
- 60) Wurdeman SR, Myers SA, Jacobsen AL, **Stergiou N.** (2014). Adaptation and prosthesis effects on stride-to-stride fluctuations in amputee gait. *PLoS One*. Jun;9(6):e100125.
- 61) Harbourne RT, Ryalls B, **Stergiou N.** (2014). Sitting and Looking: A Comparison of Stability and Visual Exploration in Infants with Typical Development and Infants with Motor Delay. *Physical & Occupational Therapy in Pediatrics*. May;34(2):197-212.
- 62) Wurdeman SR, Myers SA, **Stergiou N.** (2014). Amputation effects on the underlying complexity within transtibial amputee ankle motion. *Chaos*. Mar;24(1):013140.
- 63) Yentes JM, Kurz MJ, **Stergiou N.** (2014). Ankle and foot complex injury severity is related with a large difference in peak eversion torque between barefoot and shod conditions. *Journal of Sport and Health Sciences*. 3:227-232.
- 64) Buster T, Burnfield J, Taylor AP, **Stergiou N.** (2013). Lower extremity kinematics during walking and elliptical training in individuals with and without traumatic brain injury. *Journal of Neurological Physical Therapy*, Dec;37(4):176-86.

- 65) Wurdeman SR, Myers SA, Jacobsen AL, **Stergiou N.** (2013). Prosthesis preference is related to stride-to-stride fluctuations at the prosthetic ankle. *Journal of Rehabilitation Research and Development*, Aug;50(5):671-86.
- 66) **Stergiou N**, Yu Y, Kyvelidou A. (2013). A perspective on human movement variability with applications in infancy motor development. *Kinesiology Reviews*, 2:93-102.
- 67) Lockhart T, **Stergiou N.** (2013). New perspectives in human movement variability. *Annals in Biomedical Engineering*. Aug;41(8):1593-4.
- 68) Haworth JL, Harbourne RT, Vallabhajosula S, **Stergiou N.** (2103). Center of pressure and the projection of the time-course of sitting skill acquisition. *Gait & Posture*. Sep;38(4):806-11.
- 69) Arpin DJ, Stuber W, **Stergiou N**, Kurz MJ. (2013). Motor control of the lower extremity musculature in children with cerebral palsy. *Research in Developmental Disabilities*. 34(4):1134-1143.
- 70) McGrath D, Doheny EP, Walsh L, McKeown D, Cunningham C, Crosby L, Kenny RA, **Stergiou N**, Caulfield B, Greene BR. (2012). Taking balance measurement out of the laboratory and into the home: discriminatory capability of novel centre of pressure measurement in fallers and non-fallers. *IEEE Engineering in Medicine and Biology*. 2012:3296-9.
- 71) Sethi A, Patterson T, McGuirk T, Patten C, Richards LG, **Stergiou N.** (2013). Temporal structure of variability decreases in upper extremity movements post stroke. *Clinical Biomechanics*. Feb;28(2):134-9.
- 72) Decker LM, Cignetti F, **Stergiou N.** (2013). Executive function orchestrates regulation of task-relevant gait fluctuations. *Gait & Posture*. Jul;38(3):537-40.
- 73) Kyvelidou A, Harbourne RT, Willett SL, Stergiou N. (2013). Sitting postural control in preterm infants with typical development, motor delay, or cerebral palsy. *Pediatric Physical Therapy*. 25(1):46-51.
- 74) Wurdeman SR, **Stergiou N.** (2013). Temporal structure of variability reveals similar control mechanisms during lateral stepping and forward walking. *Gait & Posture*. May;38(1):73-8.
- 75) Wurdeman SR, Myers SA, **Stergiou N.** (2013). Transtibial amputee joint motion has increased attractor divergence during walking compared to non-amputee gait. *Annals of Biomedical Engineering*. Apr;41(4):806-13.
- 76) Mukherjee M, Koutakis P, Siu KC, Fayad P, **Stergiou N.** (2013). Stroke survivors control the temporal structure of variability during reaching in dynamic environments. *Annals of Biomedical Engineering*. Feb;41(2):366-76.
- 77) Yentes JM, Hunt N, Schmid KK, Kaipust JP, McGrath D, **Stergiou N.** (2013). The appropriate use of approximate entropy and sample entropy with short gait data sets. *Annals of Biomedical Engineering*. Feb;41(2):349-65.
- 78) Myers SA, Johanning JM, Pipinos II, Schmid KK, **Stergiou N.** (2013). Vascular occlusion affects gait variability patterns of healthy younger and older individuals. *Annals of Biomedical Engineering*. Aug;41(8):1692-702.
- 79) Kaipust JP, McGrath D, Mukherjee M, **Stergiou N.** (2013). Gait variability is altered in older adults when listening to auditory stimuli with differing temporal structures. *Annals of Biomedical Engineering*. Aug;41(8):1595-603.
- 80) Wurdeman SR, Huisinga JM, Filipi M, **Stergiou N.** (2013). Multiple sclerosis alters the mechanical work performed on the body's center of mass during gait. *Journal of Applied Biomechanics*. Aug;29(4):435-42.

- 81) Huisinga JM, Schmid K, Filipi ML, **Stergiou N.** (2013). Gait mechanics are different between healthy controls and patients with multiple sclerosis. *Journal of Applied Biomechanics*. Jun;29(3):303-11.
- 82) Koutakis P, Mukherjee M, Vallabhajosula S, Blanke DJ, **Stergiou N.** (2013). Path integration: effect on curved path complexity and sensory system on blindfolded walking. *Gait & Posture*. Feb;37(2):154-8.
- 83) Dusing SC, Thacker LR, **Stergiou N,** Galloway JC. (2013). Early complexity supports development of motor behaviors in the first months of life. *Developmental Psychobiology*. May;55(4):404-14.
- 84) Decker LM, Cignetti F, Potter JF, Studenski SA, **Stergiou N.** (2012). Use of motor abundance in young and older adults during dual-task treadmill walking. *PLoS One*. 7(7):e41306.
- 85) Huisinga JM, Yentes JM, Filipi ML, **Stergiou N.** (2012). Postural control strategy during standing is altered in patients with multiple sclerosis. *Neuroscience Letters*. Aug;524(2):124-8.
- 86) Yentes JM, Huisinga JM, Myers SA, Pipinos II, Johanning JM, **Stergiou N.** (2012). Pharmacological treatment of intermittent claudication does not have a significant effect on gait impairments during claudication pain. *Journal of Applied Biomechanics*. May;28(2):184-91.
- 87) Wurdeman SR, Koutakis P, Myers SA, Johanning JM, Pipinos II, **Stergiou N.** (2012). Patients with peripheral arterial disease exhibit reduced joint powers compared to velocity-matched controls. *Gait & Posture*. Jul;36(3):506-9.
- 88) Kaipust JP, Huisinga JM, Filipi M, **Stergiou N.** (2012). Gait variability measures reveal differences between multiple sclerosis patients and healthy controls. *Motor Control*. Apr;16(2):229-44.
- 89) Patras K, Zampeli F, Ristanis S, Tsepis E, Ziogas G, **Stergiou N,** Georgoulis AD. (2012). Hamstring-dominant strategy of the bone-patellar tendon-bone graft anterior cruciate ligament-reconstructed leg versus quadriceps-dominant strategy of the contralateral intact leg during high-intensity exercise in male athletes. *Arthroscopy*. May;28(9):1262-70.
- 90) Huisinga JM, Filipi ML, **Stergiou N.** (2012). Supervised resistance training results in changes in postural control in patients with multiple sclerosis. *Motor Control*. Jan;16(1):50-63.
- 91) Wurdeman SR, Myers SA, Johanning JM, Pipinos II, **Stergiou N.** (2012). External work is deficient in both limbs of patients with unilateral PAD. *Medical Engineering & Physics*. Dec;34(10):1421-6.
- 92) Decker LM, Cignetti F, **Stergiou N.** (2012). Wearing a safety harness during treadmill walking influences lower extremity kinematics mainly through changes in ankle regularity and local stability. *Journal of Neuroengineering and Rehabilitation*. Feb;3;9(1):8.
- 93) Wurdeman SR, Huben NB, **Stergiou N.** (2012). Variability of gait is dependent on direction of progression: Implications for active control. *Journal of Biomechanics*. Feb; 23;45(4):653-9.
- 94) Wurdeman SR, Yentes JM, Huben NB, **Stergiou N.** (2012). An unstable shoe with a rocker bottom redistributes external work. *Footwear Science*. 4(2):153-8.
- 95) Vallabhajosula S, Yentes JM, **Stergiou N.** (2012). Frontal joint dynamics when initiating stair ascent from a walk versus a stand. *Journal of Biomechanics*. Feb;45(3):609-13.
- 96) Cignetti F, Decker LM, **Stergiou N.** (2012). Sensitivity of the Wolf's and Rosenstein's algorithms to evaluate local dynamic stability from small gait data sets. *Annals of Biomedical Engineering*. May;40(5):1122-30.
- 97) Smith BA, **Stergiou N,** Ulrich BD. (2011). Patterns of gait variability across the lifespan in persons with and without Down syndrome. *Journal of Neurologic Physical Therapy*. Dec; 35(4):170-7.

- 98) Huisinga JM, Schmid KK, Filipi ML, **Stergiou N.** (2012). Persons with multiple sclerosis show altered joint kinetics during walking after participating in elliptical exercise. *Journal of Applied Biomechanics*. Jul;28(3):249-57.
- 99) Patras K, Ziogas G, Ristanis S, Tsepis E, Tsiaras V, **Stergiou N**, Georgoulis AD. (2011). Endurance markers are related with local neuromuscular response for the intact but not for the ACL reconstructed leg during high intensity running. *Journal of Sports Medicine and Physical Fitness*. 51(4):708-14.
- 100) Vallabhajosula S, Yentes JM, Momcilovic M, Blanke D, **Stergiou N.** (2011). Do lower-extremity joint dynamics change when stair negotiation is initiated with a self-selected comfortable gait speed? *Gait & Posture*. Feb;35(2):203-8.
- 101) Huisinga JM, Filipi ML, Schmid KK, **Stergiou N.** (2011). Is there a relationship between fatigue questionnaires and gait mechanics in patients with Multiple Sclerosis? *Archives of Physical Medicine and Rehabilitation*. Oct;92(10):1594-601.
- 102) Huisinga JM, Filipi ML, **Stergiou N.** (2011). Elliptical exercise improves fatigue ratings and quality of life in patients with Multiple Sclerosis. *Journal of Rehabilitation Research and Development*. 48(7):881-90.
- 103) Smith BA, Teulier C, Sansom J, **Stergiou N**, Ulrich BD. (2011). Approximate entropy values demonstrate impaired neuromotor control of spontaneous leg activity in infants with myelomeningocele. *Pediatric Physical Therapy*. Fall;23(3):241-7.
- 104) **Stergiou N**, Decker LM. (2011). Human movement variability, nonlinear dynamics, and pathology: Is there a connection? *Human Movement Science*. Oct;30(5):869-88.
- 105) Ristanis S, Tsepis E, Giotis D, Zampeli F, **Stergiou N**, Georgoulis AD. (2011). Knee flexor muscle responses under fatigue after harvesting the hamstrings for anterior cruciate ligament reconstruction. *Clinical Journal of Sports Medicine*. Jul;21(4):288-93. Erratum in: Clin J Sport Med. 2011 Sep;21(5):466.
- 106) Deffeyes JE, Harbourne RT, Stuberger WA, **Stergiou N.** (2011). Sensory information utilization and time delays characterize motor developmental pathology in infant sitting postural control. *Motor Control*. Apr;15(2):302-17.
- 107) Myers SA, Pipinos II, Johanning JM, **Stergiou N.** (2011). Gait variability of patients with intermittent claudication is similar before and after the onset of claudication pain. *Clinical Biomechanics*. Aug;26(7):729-34.
- 108) Decker LM, Moraiti C, **Stergiou N**, Georgoulis AD. (2011). New insights into anterior cruciate ligament deficiency and reconstruction through the assessment of knee kinematic variability in terms of nonlinear dynamics. *Knee Surgery, Sports Traumatology, Arthroscopy*. Oct;19(10):1620-33.
- 109) Giotis D, Tsiaras V, Ristanis S, Zampeli F, Mitsionis G, **Stergiou N**, Georgoulis AD. (2011). Knee braces can decrease tibial rotation during pivoting that occurs in high demanding activities. *Knee Surgery, Sports Traumatology, Arthroscopy*. Aug;19(8):1347-54.
- 110) Mukherjee M, Siu KC, Katsavelis D, Fayad P, **Stergiou N.** (2011). The influence of visual perception of self-motion on locomotor adaptation to unilateral limb loading. *Journal of Motor Behavior*. 43(2):101-11.
- 111) Deffeyes JE, Harbourne RT, Stuberger WA, **Stergiou N.** (2011). Approximate entropy used to assess sitting postural sway of infants with developmental delay. *Infant Behavior and Development*. Feb;34(1):81-99.

- 112) Cignetti F, Kyvelidou A, Harbourne RT, **Stergiou N.** (2011). Anterior-posterior and medial-lateral control of sway in infants during sitting acquisition does not become adult-like. *Gait & Posture*. Jan;33(1):88-92.
- 113) Wurdeman SR, Huisinga JM, Filipi M, **Stergiou N.** (2011). Multiple sclerosis affects the frequency content in the vertical ground reaction forces during walking. *Clinical Biomechanics*. Feb;26(2):207-12.
- 114) Yentes JM, Sayles H, Meza J, Mannino DM, Rennard SI, **Stergiou N.** (2011). Walking abnormalities are associated with COPD: An investigation of the NHANES III dataset. *Respiratory Medicine*. Jan;105(1):80-7.
- 115) Ziogas GG, Patras KN, **Stergiou N,** Georgoulis AD. (2011). Velocity at lactate threshold and running economy must also be considered along with maximal oxygen uptake when testing elite soccer players during preseason. *Journal of Strength and Conditioning Research*. Feb;25(2):414-9.
- 116) Filipi ML, Leuschen P, Huisinga JM, Schmaderer L, Vogel J, Kucera D, **Stergiou N.** (2010). Impact of Resistance Training on Balance and Gait in Multiple Sclerosis. *Internal Journal of Multiple Sclerosis Care*. 12:6-12.
- 117) Harbourne RT, Willett S, Kyvelidou A, Deffeyes J, **Stergiou N.** (2010). A comparison of interventions for children with cerebral palsy to improve sitting postural control: a clinical trial. *Physical Therapy*. Dec;90(12):1881-98.
- 118) Kyvelidou A, Harbourne RT, Shostrom VK, **Stergiou N.** (2010). Reliability of center of pressure measures for assessing the development of sitting postural control in infants with or at risk of cerebral palsy. *Archives of Physical Medicine and Rehabilitation*. Oct;91:1593-601.
- 119) Huisinga JM, Pipinos II, **Stergiou N,** Johanning JM. (2010). Treatment with pharmacological agents in peripheral arterial disease patients does not result in biomechanical gait changes. *Journal of Applied Biomechanics*. Aug;26:341-348.
- 120) Myers SA, **Stergiou N,** Pipinos II, Johanning JM. (2010). Gait variability patterns are altered in healthy young individuals during the acute reperfusion phase of ischemia-reperfusion. *Journal of Surgical Research*. Nov;164(1):6-12.
- 121) Siu KC, Suh IH, Mukherjee M, Oleynikov D, **Stergiou N.** (2010). The effect of music on robot-assisted laparoscopic surgical performance. *Surgical Innovations*. Dec;17(4):306-11.
- 122) Zampeli F, Moraiti CO, Xergia S, Tsiaras VA, **Stergiou N,** Georgoulis AD. (2010). Stride-to-stride variability is altered during backward walking in anterior cruciate ligament deficient patients. *Clinical Biomechanics*. Dec;25(10):1037-41.
- 123) Kyvelidou A, Harbourne RT, **Stergiou N.** (2010). Severity and characteristics of developmental delay can be assessed using variability measures of sitting posture. *Pediatric Physical Therapy*. Fall;22(3):259-66.
- 124) Koutakis P, Johanning JM, Haynatzki GR, Myers SA, **Stergiou N,** Longo GM, Pipinos II. (2010). Abnormal joint powers before and after the onset of claudication symptoms. *Journal of Vascular Surgery*. Aug;52(2):340-7.
- 125) Moraiti CO, **Stergiou N,** Vasiliadis HS, Motsis E, Georgoulis A. (2010). Anterior cruciate ligament reconstruction results in alterations in gait variability. *Gait & Posture*. Jun;32(2):169-75.
- 126) Katsavelis D, Mukherjee M, Decker L, **Stergiou N.** (2010). The effect of virtual reality on gait variability. *Nonlinear Dynamics of Psychology and Life Sciences*. Jul;14(3):239-56.
- 127) Huisinga JM, Pipinos II, Johanning JM, **Stergiou N.** (2010). The effect of pharmacological treatment on gait biomechanics in peripheral arterial disease patients. *Journal of Neuroengineering and Rehabilitation*. Jun 7;7:25.

- 128) Morley JB, Decker LM, **Stergiou N**, Dierks T, Blanke D, French JA (2010). Effects of varying amounts of pronation on the mediolateral ground reaction forces during barefoot versus shoe running. *Journal of Applied Biomechanics*. May;26(2):205-14.
- 129) Katsavelis D, Mukherjee M, Decker L, **Stergiou N**. (2010). Variability of lower extremity joint kinematics during backward walking in a virtual environment. *Nonlinear Dynamics of Psychology and Life Sciences*. Apr;14(2):165-78.
- 130) Kurz MJ, Markopoulou K, **Stergiou N**. (2010). Attractor divergence as a metric for assessing walking balance. *Nonlinear Dynamics of Psychology and Life Sciences*. Apr;14(2):151-64.
- 131) Smith BA, **Stergiou N**, Ulrich BD. (2010). Lyapunov exponent and surrogation analysis of patterns of variability: Profiles in new walkers with and without Down syndrome. *Motor Control*. Jan;14(1):126-142.
- 132) Patras K, Ziogas G, Ristanis S, Tsepis E, **Stergiou N**, Georgoulis AD. (2010). ACL reconstructed patients with a BPTB graft present an impaired vastus lateralis neuromuscular response during high intensity running. *Journal of Science and Medicine in Sport*. Nov;13(6):573-7.
- 133) Thigpen CA, Padua DA, Michener LA, Guskiewicz K, Giuliani C, Keener JD, **Stergiou N**. (2010). Head and shoulder posture affect scapular mechanics and muscle activity in overhead tasks. *Journal of Electromyography and Kinesiology*. Aug;20:701-9.
- 134) Siu KC, Suh IH, Mukherjee M, Oleynikov D, **Stergiou N**. (2010). The impact of environmental noise on robot-assisted laparoscopic surgical performance. *Surgery*. Jan;147(1):107-13.
- 135) Koutakis P, Pipinos II, Myers SA, **Stergiou N**, Lynch TG, Johanning JM. (2010). Joint torques and powers are reduced during ambulation for both limbs in patients with unilateral claudication. *Journal of Vascular Surgery*. Jan;51(1):80-8.
- 136) Cavanaugh JT, Kochi N, **Stergiou N**. (2010). Nonlinear analysis of ambulatory activity patterns in community-dwelling older adults. *Journal of Gerontology Series A: Biological Sciences and Medical Sciences*. Feb;65(2):197-203.
- 137) Cavanaugh, JT, **Stergiou N**. (2010). Response to Chastin et al.: Analysis of onlinear patterns of activity. *Journals of Gerontology Series A: Biological Sciences and Medical Sciences*. Nov;65A(11):1256-1258.
- 138) Decker LM, Cignetti F, **Stergiou N**. (2010). Complexity and Human Gait. *Revista Andaluza de Medicina del Deporte*. 3(1):2-12.
- 139) Luo HY, Ci S, Wu DL, **Stergiou N**, Siu KC. (2010). A Remote Markerless Real-time Human Gait Monitoring for e-Healthcare Based on Content-aware Wireless Multimedia Communications. *IEEE Wireless Communications*. Feb;17(1):44-50.
- 140) Dusing SC, Kyvelidou A, Mercer VS, **Stergiou N**. (2009). Infants born preterm exhibit different patterns of center-of-pressure movement than infants born at full term. *Physical Therapy*. Dec;89(12):1354-62.
- 141) Deffeyes JE, Kochi N, Harbourne RT, Kyvelidou A, Stuberger WA, **Stergiou N**. (2009). Nonlinear detrended fluctuation analysis of sitting center-of-pressure data as an early measure of motor development pathology in infants. *Nonlinear Dynamics, Psychology, Life Sciences*. Oct;13(4):351-68.
- 142) Ristanis S, **Stergiou N**, Siavara E, Ntoulia A, Mitsionis G, Georgoulis AD. (2009). Effect of femoral tunnel placement for reconstruction of the anterior cruciate ligament on tibial rotation. *Journal of Bone and Joint Surgery*. Sep;91(9):2151-8.



- 143) Ristanis S, Tsepis E, Giotis D, **Stergiou N**, Cerulli G, Georgoulis AD. (2009). Electromechanical delay of the knee flexor muscles is impaired after harvesting hamstrings tendons for anterior cruciate ligament reconstruction. *American Journal of Sports Medicine*. Nov;37(11):2179-2186.
- 144) Deffeyes JE, Harbourne RT, DeJong SL, Kyvelidou A, Stuberger WA, **Stergiou N**. (2009). Use of information entropy measures of sitting postural sway to quantify developmental delay in infants. *Journal of Neuroengineering and Rehabilitation*. Aug 11;6:34. doi: 10.1186/1743-0003-6-34.
- 145) Kyvelidou A, Harbourne RT, Stuberger WA, Sun J, **Stergiou N**. (2009). Reliability of center of pressure measures for assessing the development of sitting postural control. *Archives of Physical Medicine and Rehabilitation*. Jul;90(7):1176-84.
- 146) Moraiti CO, **Stergiou N**, Ristanis S, Vasiliadis HS, Patras K, Lee C, Georgoulis AD. (2009). The effect of anterior cruciate ligament reconstruction on stride-to-stride variability. *Arthroscopy*. Jul;25(7): 742-9.
- 147) Patras C, Ziogas G, Ristanis S, Tsepis E, **Stergiou N**, Georgoulis AD. (2009). High intensity running results in an impaired neuromuscular response in ACL reconstructed individuals. *Knee Surgery, Sports Traumatology, Arthroscopy*. Aug;17(8):977-84.
- 148) Deffeyes JE, Harbourne RT, Kyvelidou A, Stuberger WA, **Stergiou N**. (2009). Nonlinear analysis of sitting postural sway indicates developmental delay in infants. *Clinical Biomechanics*. Aug;24(7):564-70.
- 149) Suh IH, Siu KC, Mukherjee M, Monk E, Oleynikov D, **Stergiou N**. (2009). Consistency of performance of robot-assisted surgical tasks in virtual reality. *Studies in Health Technology and Informatics*. 142:369-373.
- 150) Mukherjee M, Siu KC, Suh IH, Klutman A, Oleynikov D, **Stergiou N**. (2009). A Virtual Reality Training Program for improvement of robotic surgical skills. *Studies in Health Technology and Informatics*. 142:210-214.
- 151) Myers SA, Johanning JM, **Stergiou N**, Celis RI, Robinson L, Pipinos II. (2009). Gait variability is altered in patients with peripheral arterial disease. *Journal of Vascular Surgery*. Apr;49(4):924-931.
- 152) Volkman KG, **Stergiou N**, Stuberger W, Blanke D, Stoner J. (2009). Factors affecting functional reach scores in youth with typical development. *Pediatric Physical Therapy*. Spring;21(1):38-44.
- 153) Kyvelidou A, Stuberger WA, Harbourne RT, Deffeyes JE, Blanke D, **Stergiou N**. (2009). Development of upper body coordination during sitting in typically developing infants. *Pediatric Research*. May;65(5):553-8.
- 154) Chouliaras V, Ristanis S, Moraiti C, Tzimas V, **Stergiou N**, Georgoulis AD. (2009). Anterior cruciate ligament reconstruction with a quadrupled hamstrings tendon autograft does not restore tibial rotation to normative levels during landing from a jump and subsequent pivoting. *Journal of Sports Medicine & Physical Fitness*. Mar;49(1):64-70.
- 155) Potach DH, Katsavelis D, Karst GM, Latin RW, **Stergiou N**. (2009). The effects of a plyometric training program on the latency time of the quadriceps femoris and gastrocnemius short-latency responses. *Journal of Sports Medicine & Physical Fitness*. Mar;49(1):35-43.
- 156) Decker L, Houser JJ, Noble JM, Karst GM, **Stergiou N**. (2009). The effects of shoe traction and obstacle height on lower extremity coordination dynamics during walking. *Applied Ergonomics*. Sep;40(5):895-903.

- 157) Harbourne RT, **Stergiou N.** (2009). Movement Variability and the Use of Nonlinear Tools: Principles to Guide Physical Therapy Practice. *Physical Therapy*. Mar;89(3):267-282.
- 158) Harbourne RT, Deffeyes JE, Kyvelidou A, **Stergiou N.** (2009). Complexity of postural control in infants: linear & nonlinear features revealed by principal component analysis. *Nonlinear Dynamics, Psychology, Life Sciences*. Jan;13(1):123-44.
- 159) Judkins TN, Oleynikov D, **Stergiou N.** (2009). Electromyographic response is altered during robotic surgical training with augmented feedback. *Journal of Biomechanics*. Jan 5;42(1):71-6.
- 160) Celis R, Pipinos II, Scott-Pandorf MM, Myers SA, **Stergiou N**, Johanning JM. (2009). Peripheral arterial disease affects kinematics during walking. *Journal of Vascular Surgery*. Jan;49(1):127-32.
- 161) Judkins TN, Oleynikov D, **Stergiou N.** (2009). Objective evaluation of expert and novice performance during robotic surgical training tasks. *Surgical Endoscopy*. Mar;23(3):590-597.
- 162) Katsavelis D, Siu KC, Brown-Clerk B, Lee IH, Lee YK, Oleynikov D, **Stergiou N.** (2009). Validated robotic laparoscopic surgical training in a virtual-reality environment. *Surgical Endoscopy*. Jan;23(1):66-73.
- 163) Narazaki K, Berg K, **Stergiou N**, Chen B. (2009). Physiological demands of competitive basketball. *Scandinavian Journal of Medicine and Science in Sports*. Jun;19(3):425-32.
- 164) Padala KP, Padala P, **Stergiou N**, Bissel MA, Davis S, Malloy T, Potter J, Burke WJ. (2009). Wii-Fit for balance and gait in skilled nursing facility: A retrospective study. *Gerontologist*. 49:50-51.
- 165) Pipinos II, Myers SA, Johanning JM, **Stergiou N.** (2009). Reply to letter to the editor on Gait variability is altered in patients with peripheral arterial disease. *Journal of Vascular Surgery*. Oct;50(4):976-977.
- 166) Kyvelidou A, Kurz MJ, Ehlers JL, **Stergiou N.** (2008). Aging and partial body weight support affects gait variability. *Journal of Neuroengineering Rehabilitation*. Sep 19;5:22. doi: 10.1186/1743-0003-5-22.
- 167) Houser JJ, Decker L, **Stergiou N.** (2008). Stepping over obstacles of different heights and varied shoe traction alter the kinetic strategies of the leading limb. *Ergonomics*. 51(12):1847-59.
- 168) Chen SJ, Pipinos II, Johanning JM, Radovic M, Huisinga JM, Myers SA, **Stergiou N.** (2008). Bilateral claudication results in alterations in the gait biomechanics at the hip and ankle joints. *Journal of Biomechanics*. Aug 7;41(11):2506-14.
- 169) Judkins TN, Oleynikov D, **Stergiou N.** (2008). Enhanced robotic surgical training using augmented visual feedback. *Surgical Innovation*. Mar;15(1):59-68.
- 170) Brown-Clerk B, Siu KC, Katsavelis D, Lee I, Oleynikov D, **Stergiou N.** (2008). Validating advanced robot-assisted laparoscopic training task in virtual reality. *Studies in Health Technology and Informatics*. 132:45-9.
- 171) Myers SA, Johanning JM, **Stergiou N**, Lynch TG, Longo GM, Pipinos II. (2008). Claudication distances and the Walking Impairment Questionnaire best describe the ambulatory limitations in patients with symptomatic Peripheral Arterial Disease. *Journal of Vascular Surgery*. Mar;47(3):550-555.
- 172) Cavanaugh JT, Mercer VS, **Stergiou N.** (2007). Approximate entropy detects the effect of a secondary cognitive task on postural control in healthy young adults: a methodological report. *Journal of Neuroengineering and Rehabilitation*. Oct 30;4:42.

- 173) Moraiti C, **Stergiou N**, Ristanis S, Georgoulis AD. (2007). ACL deficiency affects stride-to-stride variability as measured using nonlinear methodology. *Knee Surgery Sports Traumatology and Arthroscopy*. Dec;15(12):1406-1413.
- 174) Scott-Pandorf MM, **Stergiou N**, Johanning JM, Robinson L, Lynch TG, Pipinos II. (2007). Peripheral arterial disease affects ground reaction forces during walking. *Journal of Vascular Surgery*. Sep;46(3):491-9.
- 175) Kurz MJ, **Stergiou N**. (2007). Do horizontal propulsive forces influence the nonlinear structure of locomotion? *Journal of Neuroengineering and Rehabilitation*. Aug 15;4:30.
- 176) **Stergiou N**, Ristanis S, Moraiti C, Georgoulis AD. (2007). Tibial rotation in anterior cruciate ligament (ACL)-deficient and ACL-reconstructed knees: A theoretical proposition for the development of osteoarthritis. *Sports Medicine*. 37(7):601-13.
- 177) Kurz MJ, **Stergiou, N**. (2007). Hip actuations can be used to control bifurcations and chaos in a passive dynamic walking model. *Journal of Biomechanical Engineering*. Apr;129(2):216-22.
- 178) Fiedler MJ, Chen SJ, Judkins TN, Oleynikov D, **Stergiou N**. (2007). Virtual reality for robotic laparoscopic surgical training. *Studies in Health Technology and Informatics*. 125:127-9.
- 179) Narazaki K, Oleynikov D, **Stergiou N**. (2007). Objective assessment of proficiency with bimanual inanimate tasks in robotic laparoscopy. *Journal of Laparoendoscopic Advanced Surgical Techniques*. Feb;17(1):47-52.
- 180) Volkman K, **Stergiou N**, Stuber W, Blanke D., Stoner JA. (2007). Methods to improve the reliability of the functional reach test in children and adolescents with typical development. *Pediatric Physical Therapy*. 19(1):20-27.
- 181) Chouliaras V, Ristanis S, Moraiti C, **Stergiou N**, Georgoulis AD. (2007). Effectiveness of reconstruction of the anterior cruciate ligament with quadrupled hamstrings and bone-patellar tendon-bone autografts: an in-vivo study comparing tibial internal-external rotation. *American Journal of Sports Medicine*. Feb;35(2):189-86.
- 182) Georgoulis AD, Ristanis S, Chouliaras V, Moraiti C, **Stergiou N**. (2007). Tibial rotation is not restored by ACL reconstruction with a hamstring graft. *Clinical Orthopaedics and Related Research*. Jan;454:89-94.
- 183) Georgoulis AD, Kiapidou IS, Velogianni L, **Stergiou N**, Boland A. (2007). Herodiscus, the father of sports medicine. *Knee Surgery Sports Traumatology and Arthroscopy*. Mar; 15(3):315-8.
- 184) Narazaki N, Narazaki K, **Stergiou N**. (2007). Kinetic and kinematic analysis of a judo throwing technique: Osoto-gari. *Bulletin of the Association for the Scientific Studies on Judo, Kodokan*. 11:19-32.
- 185) Cavanaugh JT, Guskiewicz KM, Giuliani C, Marshall S, Mercer VS, **Stergiou N**. (2006). Recovery of postural control after cerebral concussion: New insights using Approximate Entropy. *Journal of Athletic Training*. Jul-Sep;41(3):305-13.
- 186) **Stergiou N**, Harbourne R, Cavanaugh J. (2006). Optimal Movement Variability: A New Theoretical Perspective for Neurologic Physical Therapy. *Journal of Neurologic Physical Therapy*. Sep;30(3):120-129.
- 187) Ristanis S, **Stergiou N**, Patras K, Tsepis E, Moraiti C, Georgoulis AD. (2006). Follow-up evaluation two years after ACL reconstruction with bone-patellar tendon-bone graft shows that excessive tibial rotation persists. *Clinical Journal of Sports Medicine*. Mar;16(2):111-116.
- 188) Georgoulis AD, Moraiti C, Ristanis S, **Stergiou N**. (2006). A novel approach to measure variability in the anterior cruciate ligament deficient knee during walking: the use of the

- Approximate Entropy in orthopaedics. *Journal of Clinical Monitoring and Computing*. Feb;20(1):11-8.
- 189) Judkins TN, Oleynikov D, Narazaki K, **Stergiou N.** (2006). Robotic surgery and training: Electromyographic correlates of robotic laparoscopic training. *Surgical Endoscopy and Other Interventional Techniques*. May;20(5):824-9.
- 190) Kurz MJ, **Stergiou N.** (2006). Correlated joint fluctuations can influence the selection of steady state gait patterns in the elderly. *Gait and Posture*. Dec;24(4):435-40.
- 191) Judkins TN, Oleynikov D, **Stergiou N.** (2006). Real-time augmented feedback benefits robotic laparoscopic training. *Studies in Health Technology and Informatics*. 119:243-8.
- 192) Narazaki K, Oleynikov D, **Stergiou N.** (2006). Robotic surgery training and performance: identifying objective variables for quantifying the extent of proficiency. *Surgical Endoscopy*. Jan;20(1):96-103.
- 193) Miller DJ, **Stergiou N**, Kurz MJ. (2006). An improved surrogate method for detecting the presence of chaos in gait. *Journal of Biomechanics*. 39(15):2873-6.
- 194) Wristen B, Evans S, **Stergiou N.** (2006). Sight-Reading Versus Repertoire Performance on the Piano: A Case Study Using High Speed Motion Analysis. *Medical Problems of Performing Artists*. 21(1):10-16.
- 195) Hreljac A, **Stergiou N**, Scholten SD. (2005). Joint kinetics of the ankle and knee when running over obstacles. *Journal of Sports Medicine and Physical Fitness*. 45(4):476-82.
- 196) Ristanis, S., **Stergiou, N.**, Patras, K., Basileiadis, H., Giakas, G., Georgoulis, A.D. (2005). Excessive tibial rotation during high demand activities is not restored by ACL reconstruction. *Arthroscopy*. Nov;21(11):1323-9.
- 197) Cavanaugh JT, Guskiewicz KM, **Stergiou N.** (2005). A nonlinear dynamic approach for evaluating postural control: New directions for the management of sport-related cerebral concussion. *Sports Medicine*. 35(11):935-950.
- 198) Cavanaugh JT, Guskiewicz KM, Giuliani C, Marshall S, Mercer VS, **Stergiou N.** (2005). Detecting altered postural control after cerebral concussion in athletes with postural stability. *British Journal of Sports Medicine*. Nov;39(11):805-11.
- 199) Kurz MJ, **Stergiou N.** (2005). An artificial neural network that utilizes hip joint actuations to control bifurcations and chaos in a passive dynamic bipedal walking model. *Biological Cybernetics*, Sep;93(3):213-21.
- 200) Georgoulis AD, Ristanis S, Papadonikolakis A, Tsepis E, Moebius U, Moraiti C, **Stergiou N.** (2005). Electromechanical delay of the knee extensor muscles is not altered after harvesting the patellar tendon as a graft for anterior cruciate ligament reconstruction: Implications for sports performance. *Knee Surgery Sports Traumatology and Arthroscopy*, Sep;13(6):437-43.
- 201) Kurz MJ, **Stergiou N**, Buzzi UH, Georgoulis AD. (2005). The effect of anterior cruciate ligament reconstruction on lower extremity relative phase dynamics during walking and running. *Knee Surgery Sports Traumatology Arthroscopy*, Mar;13(2):107-15.
- 202) **Stergiou N**, Scott MM. (2005). Baseline measures are altered in biomechanical studies. *Journal of Biomechanics*, Jan;38(1):175-178.
- 203) Georgoulis AD, Ristanis S, Chouliaras V, Moraiti C, **Stergiou N.** (2005). Anterior Cruciate Ligament Reconstruction With a Quadrupled Hamstring Autograft Does Not Restore Tibial Rotation. *Techniques in Orthopaedics*, 10(3):328-333. doi:10.1097/01.bto.0000177754.57649.0e
- 204) Georgoulis AD, Ristanis S, Moraiti C, Mitsou A, Bernard M, **Stergiou N.** (2005). Three-dimensional kinematics of the tibiofemoral joint in ACL-deficient and reconstructed patients shows increased tibial rotation. *Operative Techniques in Orthopaedics*, Jan;15(1):49-56.

- 205) Kurz MJ, **Stergiou N**, Heidel J, Foster ET. (2005). A template for the exploration of chaotic locomotive patterns. *Chaos, Solitons, and Fractals*, Jan;23(2):485-493.
- 206) **Stergiou N**, Moraiti C, Giakas G, Ristanis S, Georgoulis AD. (2004). The effect of the walking speed on the stability of the anterior cruciate ligament deficient knee. *Clinical Biomechanics*, Nov;19(9):957-963.
- 207) Kurz MJ, **Stergiou N**. (2004). Does footwear affect ankle coordination strategies? *Journal of the American Podiatric Medical Association*, Jan-Feb;94(1):53-58.
- 208) **Stergiou N**, Bates BT, Kurz MJ. (2003). Subtalar and knee joint interaction during running at various stride lengths. *Journal of Sports Medicine and Physical Fitness*, Sep;43(3):319-326.
- 209) Ristanis S, Giakas G, Papageorgiou CD, Moraiti T, **Stergiou N**, Georgoulis AD. (2003). The effects of anterior cruciate ligament reconstruction on tibial rotation during pivoting after descending stairs. *Knee Surgery Sports Traumatology Arthroscopy*, Nov;11(6):360-365.
- 210) Kurz MJ, **Stergiou N**. (2003). The aging human neuromuscular system expresses less certainty for selecting joint movement patterns during gait. *Neuroscience Letters*, Sep;348(3):155-158.
- 211) Buzzi UH, **Stergiou N**, Kurz MJ, Hageman PA, Heidel J. (2003). Nonlinear dynamics indicates aging affects variability during gait. *Clinical Biomechanics*, Jun;18(5):435-443.
- 212) Papadonikolakis A, Cooper L, **Stergiou N**, Georgoulis AD, Soucacos PN. (2003). Compensatory mechanisms in anterior cruciate ligament deficiency. *Knee Surgery Sports Traumatology Arthroscopy*. Jul;11(4):235-243.
- 213) Kurz MJ, **Stergiou N**, Blanke D. (2003). The spanning set defines variability in locomotive patterns. *Medical and Biological Engineering and Computing*, Mar;41(2):211-214.
- 214) Harbourne RT, **Stergiou N**. (2003). Nonlinear analysis of the development of sitting postural control. *Developmental Psychobiology*, May;42(4): 368-377.
- 215) Kurz MJ, **Stergiou N**. (2003). The spanning set indicates that variability during the stance period of running is affected by footwear. *Gait and Posture*, Apr;17(2):132-5.
- 216) Georgoulis AD, Papadonikolakis A, Papageorgiou CD, Mitsou A, **Stergiou N**. (2003). Three-dimensional tibiofemoral kinematics of the anterior cruciate-deficient and reconstructed knee during walking. *American Journal of Sports Medicine*, Jan-Feb;31(1): 75-79.
- 217) **Stergiou N**, Giakas G, Byrne JE, Pomeroy V. (2002). Frequency domain characteristics of ground reaction forces during walking of young and elderly females. *Clinical Biomechanics*. Oct;17(8):615-7.
- 218) Byrne JE, **Stergiou N**, Blanke D, Houser J, Kurz MJ, Hageman PA. (2002). Comparison of gait patterns between young and elderly women: An examination of coordination. *Perceptual and Motor Skills*. Feb;94(1):265-280.
- 219) Kurz MJ, **Stergiou N**. (2002). The effect of normalization and phase angle calculations on continuous relative phase. *Journal of Biomechanics*. Mar;35(3):369-374.
- 220) Scholten SD, **Stergiou N**, Hreljac A, Houser J, Blanke D, Alberts LR. (2002). Foot strike patterns after obstacle clearance during running. *Medicine and Science in Sports and Exercise*. Jan;34(1):123-129.
- 221) **Stergiou N**, Scholten SD, Jensen JL, Blanke D. (2001). Intralimb coordination following obstacle clearance during running: the effect of obstacle height. *Gait and Posture*. May;13(3):210-220.
- 222) **Stergiou N**, Jensen JL, Bates BT, Scholten SD, Tzetzis G. (2001). A Dynamical Systems investigation of lower extremity coordination during running over obstacles. *Clinical Biomechanics*. Mar;16:213-221.

- 223) Hreljac A, **Stergiou N.** (2000). Phase determination during normal running using kinematic data. *Medical and Biological Engineering and Computing*. Sep;38(5):503-506.
- 224) **Stergiou N**, Bates BT, James SL. (1999). Lower extremity asynchrony between subtalar and knee joint function during running. *Medicine and Science in Sports and Exercise*. Nov;31(11):1645-55.
- 225) Tzetzis G, Kioumourtzoglou E, Laios A, **Stergiou N.** (1999). The effect of different feedback models on acquisition and retention of technique in basketball. *Journal of Human Movement Studies*. 37:163-181.
- 226) **Stergiou N**, Bates BT. (1997). The relationship between subtalar and knee joint function as a possible mechanism for running injuries. *Gait and Posture*. 6(3):177-185.
- 227) Bates BT, **Stergiou N.** (1996). Performance accommodation to midsole hardness during running. *Journal of Human Movement Studies*. 31:189-210.
- 228) Dufek JS, Bates BT, **Stergiou N**, James CR. (1995). Interactive effects between group and single-subject response patterns. *Human Movement Science*. 14:301-323.

### **Books and Book Chapters (N = 14)**

- 1) **Stergiou N.** (2017). Nonlinear Analysis for Human Movement Variability. CRC Press, Taylor & Francis Group.
- 2) **Stergiou N**, Siu K, Myers SA, Senderling B. (2017). Biomechanics. Housh TJ, Housh DJ, Johnson G. (Ed.) *Introduction to Exercise Science*. New York, NY: Routledge Publ. (5<sup>th</sup> edition). pp. 205-240.
- 3) **Stergiou N**, Blanke DL, Myers SA, Siu KC. (2012). Biomechanics. In: Housh TJ, Housh DJ, Johnson G. (Ed.) *Introduction to Exercise Science*. Scottsdale, AZ: Holcomb Hathaway (4th edition). pp. 191-218.
- 4) Haworth JL, Vallabhajosula S, Tzetzis G, **Stergiou N.** (2012). Optimal Variability and Complexity: A Novel Approach for Management Principles. In: Banerjee S. (Ed.) *Chaos and Complexity Theory for Management: Nonlinear Dynamics*. IGI Global, USA. pp. 328-353.
- 5) **Stergiou N**, Ristanis S, Moraiti C, Georgoulis A. (2008). Gait Analysis in ACL Deficient and Reconstructed Knee. In: Prodromos C. *The Anterior Cruciate Ligament: Reconstruction and Basic Science*. Saunders Company/Elsevier. (1<sup>st</sup> edition) pp. 615-624.
- 6) **Stergiou N**, Blanke DL, Chen SJ, Siu KC. (2007). Biomechanics. In: Housh TJ, Housh DJ, Johnson G. (Ed.) *Introduction to Exercise Science*. Scottsdale, AZ: Holcomb Hathaway, Publishers, Inc. (3<sup>rd</sup> edition) pp. 207-231.
- 7) **Stergiou N.** (2004). Innovative Analyses of Human Movement. Champaign, IL: Human Kinetics Publishers.
- 8) Kurz MJ, **Stergiou, N.** (2004). Applied Dynamic Systems Theory for the Analysis of Movement. In: **Stergiou N.** (Ed.) *Innovative Analyses for Human Movement*. Champaign, IL: Human Kinetics Publishers, pp. 93-120.
- 9) Kurz MJ, **Stergiou N.** (2004). Mathematical Measures of Coordination and Variability in Gait Patterns. In: **Stergiou N.** (Ed.) *Innovative Analyses for Human Movement*. Champaign, IL: Human Kinetics Publishers, pp. 163-186.
- 10) **Stergiou N**, Buzzi UH, Kurz MJ, Heidel J. (2004). Nonlinear Tools in Human Movement. In: **Stergiou N.** (Ed.) *Innovative Analyses for Human Movement*. Champaign, IL: Human Kinetics Publishers, pp. 63-90.

- 11) Blanke D, **Stergiou N.** (2003). Biomechanics. In: Housh TJ, Housh DJ, Johnson G. (Eds.) *Introduction to Exercise Science*. San Francisco, CA: Benjamin Cummings, (2<sup>nd</sup> edition) pp. 109-130.
- 12) Blanke D, **Stergiou N.** (2000). Biomechanics. In: Housh TJ, Housh DJ. (Eds) *Introduction to Exercise Science*. Boston, MA: Allyn & Bacon Publishers, pp. 98-121.
- 13) Bates BT, **Stergiou N.** (1999). Forces acting on the lower extremity. In: Subotnick S. (Ed) *Sports Medicine of the Lower Extremity*. New York: Churchill-Livingstone, pp. 167-185.
- 14) Bates BT, **Stergiou N.** (1999). Normal patterns of walking and running. In: Subotnick S. (Ed) *Sports Medicine of the Lower Extremity*. New York: Churchill-Livingstone, pp. 157-165.

### **Translated Books (English to Greek) (N = 2)**

- 1) Kraemer WJ, Fleck SJ. (1993). **Strength Training for Young Athletes**. Champaign, IL: Human Kinetics Publishers. English to Greek (1997). Salto: Thessaloniki, Greece.
- 2) Radcliff CJ, Farentinos CR. (1985). **Plyometrics**. Champaign, IL: Human Kinetics Publishers. English to Greek (1991). Salto: Thessaloniki, Greece.

### **Other (N = 7)**

- 1) Zuniga JM, Major MJ, Peck J, Srivastava R, Pierce J, **Stergiou N.** (2018). Considerations for the Development of 3D Printed Upper-Limb Prostheses. O&P News Magazine of the American Orthotic and Prosthetic Association. Published April 16, 2018.  
<http://www.aopanet.org/publications/op-news/> Page 18-25.
- 2) Brembs B, **Stergiou N.** (2015). Comment on Wu et al “Temporal structure of motor variability is dynamically regulated and predicts motor learning ability” publication in Nature Neuroscience.  
<http://www.ncbi.nlm.nih.gov/pubmed/24413700>
- 3) Kurz MJ, **Stergiou N**, Giakas G, Georgoulis AD, Papageorgiou CD. (2002). Gait analysis in sports medicine. ESSKA 2000 Newsletter. 10:5-6.
- 4) Kurz MJ, **Stergiou N.** (1997). The need for speed. Strategies. 11:7-9.
- 5) **Stergiou N.** (2000). Archimedes: An Early Biomechanist. American Society of Biomechanics Newsletter. 13(2):8-9.
- 6) **Stergiou N.** (1995). Science and the sport shoe. *The Sports of the North*, 4226:2.
- 7) **Stergiou N.** (1994). Biomechanics of the Sport Shoe. *Sport & Wellness*, 1:6-7.
- 8) **Stergiou N.** (2002 – 2016). University of Nebraska Omaha Biomechanics Newsletter.

## **ADVISING AND TEACHING ACTIVITY**

### **DOCTORAL DISSERTATIONS SUPERVISED (N = 33)**

- 1) P. Antonellis, Through the Exercise Science Program at UNO. Title to be determined. (MEMBER)
- 2) Jo Shattuck, Through the University of Nebraska-Lincoln. Neural substrates of motor learning during execution and visualization of a novel motor task. (MEMBER, Completed May 2019)
- 3) H. Sotirakis, Through the University of Thessaloniki, Greece. Ο ρόλος της πολυπλοκότητας του περιβάλλοντος στη μάθηση αισθητικοκινητικών δεξιοτήτων, ως συνάρτηση της ηλικίας. (MEMBER)
- 4) Elias Spiropoulos, Through the University of Patras, Patras, Greece. Διερεύνηση της συσσώρευσης της μυϊκής κόπωσης στη περιοχή της μέσης και των άνω άκρων κατά την εκτέλεση επαναληπτικού έργου. (MEMBER)
- 5) Safoah Nana Twum-Ampofo, Through the University of Oklahoma Health Sciences. Postural sway velocity and sitting acquisition among infants with and without the risk of cerebral palsy (MEMBER)
- 6) Zainy Al Murad, Through the University of Montpellier. Complexity matching processes during the coupling of biological systems: Application to rehabilitation in elderly (Member/Examiner)
- 7) Jenny Kent. Through the Exercise Science Program at UNO. *The implications of lower limb impediment for our ability to walk on uneven terrain.* (CHAIR, Completed August 2018)
- 8) Troy Rand. Through the Exercise Science Program at UNO. *The Effect of Multisensory Perturbations on Postural Control.* (MEMBER, Completed August 2018)
- 9) Jordan Wickstrom. Through the Exercise Science Program at UNO. *Factors that influence postural sway in neurotypical adults and children with applications in Autism Spectrum Disorder.* (MEMBER, Completed August 2018)
- 10) Amelia Lanier. Through the Biomechanics & Movement Science Interdisciplinary Program of the University of Delaware. *Measuring changes to force control variability using Lyapunov Exponents: Looking at the influence of anterior cruciate ligament injury and reconstruction and high performance athletics.* (MEMBER, Completed February 2016)
- 11) Andreas Skiadopoulos. Through the University of Extremadura. *Biomechanical analysis and characterization of the muscular intervention and control motor quality in the context of manual material handling.* (MEMBER, Completed January 2016)
- 12) Matthew Heesch. Through the Exercise Science Program at UNO. *Transcriptional and post-translational control of PGC-1 $\alpha$  following exercise in a hot environment.* (MEMBER, Completed November 2015)
- 13) C-K Huang, Through Medical Science Interdepartmental Area at UNMC. The feedforward and feedback controls on gait in adults with diabetes. (MEMBER, Completed November 2015)
- 14) Leo Kee Hao, Through School of Mechanical and Aerospace Engineering Doctoral Program at Nanyang Technological University. *Establishing Normative Hand Transport Tangential Velocity of a Reach-to-Grasp Task: Towards an Objective Assessment for UE Stroke Rehabilitation.* (READER, Completed May 2013)
- 15) Jung-Hung Chien. Through Environmental, Agricultural, and Occupational Health, and Toxicology program at UNMC. *Postural responses to perturbations of the vestibular system during walking in healthy young and older adults.* (CHAIRMAN, Completed November 2015)



- 16) Shane Wurdeman. Through Environmental, Agricultural, and Occupational Health, and Toxicology program at UNMC. *Quantifying stride-to-stride fluctuations in amputee gait: Implications for improved rehabilitation*. (CHAIRMAN, Completed September 2013)
- 17) Joshua Haworth. Through Environmental, Agricultural, and Occupational Health, and Toxicology program at UNMC. *Perception and production of complex movement variability*. (CHAIRMAN, Completed July 2013)
- 18) Jennifer Yentes. Through Medical Science Interdepartmental Area at UNMC. *Walking and breathing coupling in patients with chronic obstructive pulmonary disease*. (CHAIRMAN, Completed June 2013)
- 19) Bernadette Brown-Clerk. Through Industrial Engineering Department at UNL. *Evaluation and safety improvement of single-site surgery through simulation*. (MEMBER, Complete May 2012)
- 20) Dimitrios Katsavelis. Through Medical Science Interdepartmental Area at UNMC. *The effect of virtual reality on human movement variability during walking* (CHAIRMAN, Completed July 2012)
- 21) Anastasia Kyvelidou. Through Medical Science Interdepartmental Area at UNMC. *A comparison of interventions for children with or at risk for CP: A dynamical systems approach – Infant sitting, postural control and sensory information*. (CHAIRMAN, Completed May 2011)
- 22) Sara Myers. Through Medical Science Interdepartmental Area at UNMC. *The Effect of Aging and Vascular Occlusion on Gait Variability*. (CHAIRMAN, Completed June 2011)
- 23) Amit Sethi. Through the Occupational Therapy Department at the University of Florida. *Upper extremity variability analysis post-stroke: New dimensions*. (MEMBER, Completed Fall 2010)
- 24) Jessie Huisinga. Through Medical Science Interdepartmental Area at UNMC. *Classification of movement characteristics of multiple sclerosis patients following an exercise training intervention*. (CHAIRMAN, Completed Summer 2010)
- 25) Joan Deffeyes. Through UNL/UNO, Psychobiology. *Nonlinear dynamics of infant sitting postural control*. (CHAIRMAN, Completed Spring 2010)
- 26) Regina Harbourne. Through Department of Educational Psychology at UNL, Developmental Psychology. *The embodied mind in early development: Sitting postural control and visual attention in infants with typical development and infants with delays* (MEMBER, Completed Spring 2010)
- 27) Beth Smith. Through the Center for Motor Behavior and Pediatric Disabilities, Division of Kinesiology, University of Michigan. *Changes in gait variability across the lifespan in persons with Down syndrome*. (MEMBER, Completed 2009)
- 28) Melanie McGrath. Through the Interdisciplinary Doctoral Program in Human Movement Science of the Dept. of Allied Health Sciences, School of Medicine, the University of North Carolina at Chapel Hill. *Changes in Lower Extremity Movement Patterns following Exercise-Induced Fatigue and Verbal Feedback*. (MEMBER, Completed Summer 2009)
- 29) Max Kurz. Through UNO Psychobiology. *Chaos in Gait*. (CHAIRMAN, Completed Spring 2006)
- 30) Chuck Thigpen. Through the Interdisciplinary Doctoral Program in Human Movement Science of the Dept. of Allied Health Sciences, School of Medicine, the University of North Carolina at Chapel Hill. *Effects of forward head and rounded shoulder posture on scapular kinematics, muscle activity, and shoulder coordination* (MEMBER, Completed Spring 2006)
- 31) Timothy Judkins. Through UNL Biomedical Engineering. *Robotic surgery and training: Quantification of performance for evaluation and training*. (CHAIRMAN, Completed Fall 2006)
- 32) Leslie Decker. Through the National Institute for Sports and Physical Education (INSEP Paris,

France) *Alternative approach to normalization and evaluation for gait patterns: application to the athletic sprint.* (READER, Completed Fall 2006)

- 33) James Cavanaugh. Through the Interdisciplinary Doctoral Program in Human Movement Science of the Dept. of Allied Health Sciences, School of Medicine, the University of North Carolina at Chapel Hill. *Assessing changes in regularity of center of pressure time series in collegiate athletes after cerebral concussion* (MEMBER, Completed Spring 2004)

### **MASTER THESES SUPERVISED (N = 43)**

- 1) D. Rowen. Through UNO Biomechanics. Cortical activity during walking with variable metronomes. (CHAIR)
- 2) J. Sommerfeld. Through UNO Biomechanics. Isolating aspects of gait through the use of pacing signals. (CHAIR, Completed May 2019)
- 3) M. Walinski-Peterson. Through UNO Geography and Geology. Looking at God through Green-Colored Glasses: Supernatural Space and the Place of Animals in Orthodox Christian Iconography. (MEMBER)
- 4) A. Kruse. Through UNO Mathematics. Impact of health practices on the spread of viruses: a Boolean network approach. (MEMBER)
- 5) N. Reynolds. Through UNO Biomechanics. Influence of fatigue on the reliability of gait variability measures. (MEMBER, Completed May 2018)
- 6) Abderrahman Ouattas. Through UNO Biomechanics. Knee joint proprioception: its effect on inter-limb joint asymmetry and dynamic stability in post-total knee arthroplasty patients. (MEMBER, Completed August 2018)
- 7) Ann Hausman. Through UNO Mathematics. The Spread of the Common Cold; a Boolean Network Approach. (MEMBER, Completed July 2017)
- 8) Maria Walinski-Peterson. Through UNO Geography and Geology. Looking at God through Green-Colored Glasses: Supernatural Space and the Place of Animals in Orthodox Christian Iconography. (MEMBER, Completed July 2016)
- 9) Haris Sotirakis. Through Aristotle University of Thessaloniki Greece. *Aging effects on postural tracking of complex visual motion cues.* (MEMBER, Completed October 2015)
- 10) Michaela Spencer. Neuromuscular Consequences of Knee Osteoarthritis. (MEMBER, Completed May 2015)
- 11) Ryan Hasenkamp. *Investigation of muscular strength in peripheral arterial disease.* (MEMBER, Completed April 2014)
- 12) Amanda Ludes. Through UNO Mathematics. *Modeling the sensitivity of Boolean networks.* (Member, Completed April 2014.)
- 13) Kayser Jansen. Through UNO Mathematics. *Phase transitions of Boolean networks with partially nested canalizing functions.* (MEMBER, Completed December 2012.)
- 14) David Arpin. *Motor control of the lower extremity musculature in children with Cerebral Palsy.* (MEMBER, Completed May 2012.)
- 15) Nathaniel Hunt. *Manipulating gait variability with Für Elise: Chaotic and fractal variations on a theme.* (CHAIRMAN, Completed July 2012.)
- 16) Elizabeth Ball. Through UNO Mathematics. *Dynamic spread of social behavior in Boolean networks.* (MEMBER, Completed May 2011.)
- 17) Elena Kokkoni. *The effects of altered somatosensory information on sitting posture in infants* (CHAIRMAN, Completed July 2011.)

- 18) Thad Buster. *The effects of body weight suspension on stroke patients*. (CHAIRMAN, Completed Fall 2010.)
- 19) Jeff Kaipust. *Effects of auditory stimulation on gait variability* (CHAIRMAN, Completed Summer 2010.)
- 20) Mira Momcilovic. *Joint moments and powers in healthy young adults during stair negotiation*. (CHAIRMAN, Completed Summer 2010.)
- 21) Melissa Kelly. *Effects of a physical activity book club on self efficacy and physical activity in Multiple Sclerosis patients*. (MEMBER, Completed Summer 2009.)
- 22) Panagiotis Koutakis. *Path Integration of Human Walking in Curved Paths*. (CHAIRMAN, Completed Spring 2009.)
- 23) Rebecca Pitz. Through UNO Mathematics. *Quantifying Degrees of Randomness in Word Rhythms of Literary Works*. (MEMBER, Completed Spring 2008.)
- 24) Clint Wutzke. *The Effect of Walking Speed on Kinematic Variability During Trans-tibial Gait*. (CHAIRMAN, Completed Spring 2008.)
- 25) Sara Myers. *The effect of peripheral arterial disease on the variability present in gait patterns*. (CHAIRMAN, Completed Summer 2007.)
- 26) Jessie Huisinga. *The effects of pharmacological therapy on gait parameters in peripheral arterial disease patients*. (MEMBER, Completed Summer 2007.)
- 27) Janmejey Tanwar. Through UNO Computer Science. *Effects of Virtual Reality on Gait (Detected by the Gait-O-Gram®)*. (CO-CHAIR, Completed Spring 2007.)
- 28) Gary L. Beck. Through UNO Mathematics. *Dynamics of random Boolean networks governed by a generalization of Rule 22 of Elementary Cellular Automata*. (MEMBER, Completed Fall 2006.)
- 29) Hitika Tanwar. Through UNO Computer Science. *Low Cost Wireless Gait-O-Gram® for Real Time Gait Analysis*. (CO-CHAIR, Completed Fall 2006.)
- 30) Anastasia Kyvelidou. *Development of upper body coordination during sitting in typically developing infants*. (CHAIRMAN, Completed Summer 2006.)
- 31) Julie Ehlers. *A kinematic comparison between young and elderly women during treadmill walking with partial body weight support*. (CHAIRMAN, Completed Summer 2005.)
- 32) Kenji Narazaki. *Bioenergetics and time-motion analysis of competitive basketball*. (MEMBER, Completed Summer 2005.)
- 33) Melissa Scott-Pandorf. *The effects of peripheral arterial disease on gait*. (CHAIRMAN, Completed Spring 2005.)
- 34) Richard Warr. Through UNO Mathematics. *Noise reduction in time series data from dynamical systems*. (MEMBER, Completed Spring 2005.)
- 35) Dimitrios Katsavelis. *The effect of fatigue on movement variability during running*. (CHAIRMAN, Completed Summer 2004.)
- 36) Kathleen Volkman. *Comparison of two styles of reaching in the functional reach test in typically developing children*. (CHAIRMAN, Completed Summer 2004.)
- 37) Ugo Buzzi. *An investigation into the dynamics of parkinsonian gait*. (CHAIRMAN, Completed Summer 2001.)
- 38) Joanna Morley. *Examination of ground reaction forces in runners with various degrees of pronation*. (CHAIRMAN, Completed Summer 2000.)
- 39) Tracy Dierks. *A three-dimensional analysis of subtalar and knee joint coupling during running over obstacles*. (CHAIRMAN, Completed Summer 1999.)

- 40) Jennifer Byrne. *A comparison of gait patterns between young and elderly women: An examination of coordination.* (CHAIRMAN, Completed Spring 1999.)
- 41) Jeremy Houser. *Lower extremity coordination during walking over obstacles with shoes of different traction.* (CHAIRMAN, Completed Spring 1999.)
- 42) Shane Scholten. *A dynamical systems theory examination of intralimb coordination during running over obstacles of different heights.* (CHAIRMAN, Completed Spring 1999.)
- 43) David Potach. *The effects of a plyometric training program on the stretch reflex latencies of quadriceps femoris and gastrocnemius.* (CHAIRMAN, Completed Fall 1998.)

### **UNDERGRADUATE THESES SUPERVISED**

Neil Huben. *The effect of Masai Barefoot Technology (rocker bottom) shoes on joint kinematics and kinetics.* (CHAIRMAN, Completed May 2011.)

### **POST DOCTORAL FELLOWS SUPERVISED (N = 17)**

2006 - 2009	Joseph Ka-Chun Siu, Ph.D.
2006 - 2011	Leslie Decker, Ph.D.
2007 - 2012	Mukul Mukherjee, Ph.D.
2009 - 2010	Shi-yun Park, Ph.D.
2009 - 2011	Fabien Cignetti, Ph.D.
2010 - 2012	Srikant Vallabhajosula, Ph.D.
2011 - 2012	Denise McGrath, Ph.D.
2012 - 2014	Mu Qiao, Ph.D.
2011 - 2013	Yawen Yu, Ph.D.
2012 - 2014	Anastasia Kyvelidou, Ph.D.
2013 - 2016	Steven Harrison, PhD.
2013 - 2015	DJ Eikema, Ph.D.
2016-present	Amelia Lanier, Ph.D.
2017-present	Andreas Skiadopoulou, Ph.D.
2017 - 2018	Joao Vaz, Ph.D.
2018-present	Luis Silva, Ph.D.
2018-present	Aaron Likens, Ph.D.

### **COURSES TAUGHT (N = 15)**

- 1) BMCH 8030/9031 Biostatistics I
- 2) APK 6225 Biomechanical Instrumentation (at the University of Florida)
- 3) PE 9401/8400 Motor Control I
- 4) PE 9100/8100 Nonlinear Analysis
- 5) PE 8400/9401 Motor Learning I
- 6) BMCH/PE 9910 Doctoral Seminar

- 7) PE 8410 Motor Control
- 8) PE 8040 Advanced Statistics
- 9) PE 4630 Biomechanics
- 10) PE 8400 Motor Learning and Control
- 11) PE 2880 Basic Anatomy and Physiology
- 12) PE 8450 Advanced Biomechanics
- 13) PE 4010/8016 Laboratory Methods in Exercise Science
- 14) HPER 8030 Research in HPER
- 15) PE 3840/8840 Microcomputer Applications in HPER

## **SERVICE**

### **PROFESSION COMMITTEE WORK**

#### University of Nebraska at Lincoln (UNL) (N = 1)

1. Biomedical Engineering Doctoral Program Admissions Committee  
Fall 2003 – present                      Role: Member

#### University of Nebraska Medical Center (UNMC) (N = 3)

1. Center for Advanced Surgical Technology (CAST)  
Spring 2006 – present, Role: Member
2. Graduate Council  
Fall 2007 – Spring 2012, Role: Member
3. Assistantship/Fellowship Selection Committee  
Fall 2007 – Spring 2012, Role: Vice-Chair and Member

#### UNMC – College of Public Health: Dept. of Environmental, Agricultural, and Occupational Health (N = 10)

1. Environmental Agricultural and Occupational Health Department Faculty Search Committee for tenure-track positions  
Fall 2007 – Spring 2012                      Role: Member                      Selection Process: Appointed  
Special Appointment; .06 FTE for 2017-2018
2. Graduate Program Committee  
Fall 2007 – Spring 2012                      Role: Chair                      Selection Process: Appointed
3. Committee for the Development of Graduate Programs  
Fall 2007 – Spring 2008                      Role: Member                      Selection Process: Appointed
4. Steering Committee for the National Institute on Aging Regional Director's Meeting at UNMC  
Fall 2009 – Spring 2010                      Role: Member                      Selection Process: Appointed
5. College of Public Health Accrediation Committee  
Fall 2009- Spring 2012                      Role: Member                      Selection Process: Appointed
6. Doctoral Program Committee  
Spring 2010 – Spring 2012                      Role: Chair                      Selection Process: Appointed
7. UNMC Fellowship Selection Committee, Bioinformatics, Epidermiology and CTR Section  
Spring 2010                      Role: Chair                      Selection Process: Appointed
8. UNMC Academic Programs Committee  
Spring 2010                      Role: Member                      Selection Process: Appointed
9. COPH Accreditation of the Graduate Program  
May 2011                      Role: Member                      Selection Process: Appointed
10. COPH Engagement Committee  
May 2013 – Present                      Role: Member                      Selection Process: Appointed

#### University of Nebraska Omaha (UNO) (N = 17)

1. University Committee on Library and Learning Resources		
Fall 1998 - Spring 2001	Role: Chair	Selection Process: Appointed
2. Faculty Senate		
Fall 1998 - Spring 1999	Role: Member	Selection Process: Elected
3. Faculty Senate - Committee on Academic and Curricular Affairs.		
Fall 1998 - Spring 1999	Role: Member	Selection Process: Appointed
4. Teaching Circles		
Fall 1998 - Fall 2002	Role: Member	Selection Process: Volunteer
5. First-Year Connection Mentees program		
Fall 1999 – 2004	Role: Member.	Selection Process: Volunteer
6. Research Triangles		
Fall 2000 - Fall 2003	Role: Member	Selection Process: Volunteer
7. Search Committee for the Associate Vice Chancellor for Research and Dean of Graduate Studies		
Spring 2000	Role: Member	Selection Process: Appointed
8. Screening Committee for the Bookstore's Textbook Manager		
Summer 2000	Role: Member	Selection Process: Appointed
9. University Committee for the Advancement in Teaching		
2000 - 2003 & Fall 2007 – Present	Role: Member	Selection Process: Appointed
10. University Steering Committee for NU-Paths		
Fall 2001 – Spring 2004	Role: Member	Selection Process: Appointed
11. Psychobiology Graduate Students Admissions Committee		
Fall 2002 – Spring 2010	Role: Member	Selection Process: Volunteer
12. Award for Distinguished Researcher of Creative Activity (ADROCA) Selection Committee		
Fall 2003 – 2004	Role: Member	Selection Process: Appointed
13. University Committee for the Development of a Major in Neuroscience		
Fall 2004 – Spring 2010	Role: Member	Selection Process: Volunteer
14. Doctoral/Research Priorities Committee		
Fall 2011 – Present	Role: Member	Selection Process: Appointed
15. Faculty Senate		
Fall 2013 – Spring 2015	Role: Member	Selection Process: Elected
16. Faculty Senate - Committee on Rules and Regulations		
Fall 2013 – Spring 2015	Role: Member	Selection Process: Appointed
17. Transition Advisory Team		
May 2017 – Present	Role: Member	Selection Process: ?

#### UNO - College of Education (N = 9)

1. Technology Committee		
Fall 1996 – Spring 1997	Role: Member	Selection Process: Appointed
2. Content Pedagogy Committee		
Fall 1997 – Present	Role: Member	Selection Process: Volunteer
3. MOEC Technology Task Force		
Spring 1998 – Present	Role: Member	Selection Process: Volunteer
4. CEMS Core Group Team		
Fall 2000 – Spring 2004	Role: Member	Selection Process: Volunteer

- |   |              |                              |
|---|--------------|------------------------------|
| 5. CEMS Writing Team  |              |                              |
| Fall 2000 - Spring 2000   | Role: Member | Selection process: Volunteer |
| 6. Reappointment, Promotion, and Tenure Committee   |              |                              |
| Fall 2001   | Role: Member | Selection Process: Appointed |
| 7. TALMAS Core Group Team   |              |                              |
| Fall 2002 - Spring 2004   | Role: Member | Selection Process: Volunteer |
| 8. HPER representative for the College of Education's Academic Standards and Policy Committee |              |                              |
| Fall 2010 – Summer 2012   | Role: Member | Selection Process: Selected  |
| 9. College of Education Administrators  |              |                              |
| Fall 2015 – Present   | Role: Member | Selection Process: Appointed |

UNO – School of Health, Physical Education and Recreation (N = 14)

- |  |                |                              |
|--|----------------|------------------------------|
| 1. Search Committee for a Physical Education tenure-track position   |                |                              |
| Fall 1996, Spring 1997; Spring 2006  | Role: Member   | Selection Process: Appointed |
| 2. Athletic Training Admission and Retention Committee   |                |                              |
| Fall 2000 – 2007   | Role: Member   | Selection Process: Appointed |
| 3. Graduate Program Committee  |                |                              |
| Fall 2003 – Spring 2005  | Role: Member   | Selection Process: Elected   |
| 4. Search Committee for the Biomechanics tenure-track position   |                |                              |
| 2006-2007  | Role: Chair    | Selection Process: Appointed |
| 5. Committee for the Development of a PhD program in Exercise Science                                      |                |                              |
| Fall 2007 – Spring 2012  | Role: Co-Chair | Selection Process: Appointed |
| 6. Committee for the development of the Masters in Exercise Science tracks                                 |                |                              |
| Fall 2007 – Fall 2008  | Role: Member   | Selection Process: Appointed |
| 7. Search Committee for the Athletic Training tenure-track position  |                |                              |
| 2008-2009  | Role: Member   | Selection Process: Appointed |
| 8. Joint Appointment and Part-Time Faculty Awards Committee  |                |                              |
| 2007-2010  | Role: Chair    | Selection Process: Appointed |
| 9. Search Committee for the Assistant Professor in Physical Activity                                       |                |                              |
| 2011-2012  | Role: Member   | Selection Process: Appointed |
| 10. Committee for the Reappointment, Promotion and Tenure  |                |                              |
| 2011-2012  | Role: Member   | Selection Process: Appointed |
| 11. Doctoral Program Committee   |                |                              |
| 2012-2014  | Role: Chair    | Selection Process: Appointed |
| 12. Search Committee for the Assistant Professor in Physical Activity                                      |                |                              |
| 2012-2013  | Role: Chair    | Selection Process: Appointed |
| 13. Search Committee for the Assistant Professor in Biomechanics   |                |                              |
| 2013-2014  | Role: Chair    | Selection Process: Appointed |
| 14. Search Committee for two Assistant Professors in the Center for Research in Human Movement Variability |                |                              |
| 2014-2015  | Role: Chair    | Selection Process: Appointed |

State of Nebraska (N = 3)

1. Nebraska EPSCoR/IDeA Committee



- |   |              |  |
|---|--------------|--|
| 2011-Present  | Role: Member | Selection Process: Appointed by the Governor |
| 2. Nebraska Biomedical Engineering Working Group                                      |              |  |
| 2000– Present   | Role: Member | Selection Process: Appointed                 |
| 3. NASA Nebraska Space Grant and EPSCoR Technical Advisory Committee (TAC), Committee |              |  |
| 2012 – Present  | Role: Member | Selection Process: Appointed                 |
| 4. UNMC Center for Advanced Surgical Techonology                                      |              |  |
| 2006 – Present  | Role: Member | Selection Process: Founder                   |
| 5. Biomedical Engineering Doctoral Program Admissions Committee                       |              |  |
| 2003 – Present  | Role: Member | Selection Process: Selected.                 |

## **Presentations**

### **International Invited Workshops (N = 11)**

- 1) Portugal – *University of Lisbon*, Lisbon, June 2017.
- 2) Portugal - *University of Castello Branco*, Castello Branco, April 2016.
- 3) England - *Brunel Univeristy*, London, June 2015.
- 4) Ireland - *University College Dublin*, Dublin, May 2013.
- 5) Germany - *Interdisciplinary College 2013*. Gunne at Lake Mohne, March 2013.
- 6) Spain - *University of Pablo de Olavide*. Sevilla, Spain, March 2012.
- 7) Australia - *University of Technology of Sydney*, *Australian Institute of Sport at Canberra* and *Victorian Insitute of Sport at Melbourne*, Australia. February 2011.
- 8) Brazil - *Winter School of Biomechanics*. Sao Paolo, Brazil, July 2009; *13th Congress of the Brazilian Society of Biomechanics*. Sao Paolo, Brazil, July 2009.
- 9) Portugal - *European Workshop on Movement Science*. Lisbon, Portugal, June 2009.
- 10) Spain - *Instituto de Biomecánica de Valencia*, Valencia, Spain, November 2007.
- 11) Greece - *University of Ioannina Medical Center*, Thessaloniki, Greece, April 2005.

### **National Invited Workshops (N = 8)**

- 1) Second Annual Motion Analysis Research Center Symposium, *Nonlinear Analysis for Human Movement Variability*. Samuel Merritt University, Oakland, California, November 2016.
- 2) American Society of Biomechanics, *Nonlinear Analysis*. Omaha, Nebraska. September 2013.
- 3) Gait and Clinical Movement Analysis Society, *Nonlinear Analysis*. Grand Rapids, Michigan, June 2012.
- 4) APTA Combined Sections Meeting, *Postural control during early arm movements in the first months of life*. New Orleans, Louisiana, February 2011.
- 5) APTA Combined Sections Meeting, *Nonlinear Dynamics in Physical Therapy Intervention: How does the new concept of Complexity relate to Clinical Practice?* San Diego, California. February 2010.
- 6) New Challenges in Research Administration, *Teamwork + Trust = Success: Faculty and Sponsored Programs Working Together*. Omaha, Nebraska. April 2010.
- 7) North American Society for the Psychology of Sport and Physical Activity, *Nonlinear Dynamics in Motor Development*. Tucson, Arizona. June 2010.
- 8) American Society of Biomechanics, *Grant Writing for the NIH*. Providence, Rhode Island. August 2010.

### **Keynotes and Invited Seminars and Presentations (N = 86)**

- 1) “Somatic Dysfunction: The Cutting Edge of Neuromusculoskeletal Research” October 27th, 10th Interdisciplinary Biomedical Research Symposium, AT Still University of Heath Sciences, Kirksville, Missouri, USA.
- 2) “Brain Drain in Young Scientists of Physical Education”, November 30th, 10th International Congress of Sports Medicine, Thessaloniki, Greece.

- 3) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, October 11th 2018, 5th International Autumn School on Movement Science, Humboldt University, Berlin, Germany.
- 4) “Variability in Human Movement”, October 20th 2018, 27th Medical Conference of the Greek Military, Thessaloniki, Greece.
- 5) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, June 1st 2018, Department of Computer Science and Engineering, University of Nevada Reno, Reno, Nevada, USA.
- 6) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, May 25th 2018, Department of Human Physiology, University of Oregon, Eugene, Oregon, USA.
- 7) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, April 12th 2018, EuroMov, Université de Montpellier, Montpellier, France.
- 8) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, March 30th 2018, Department of Physiotherapy, Alexander Technological Educational Institute (A.T.E.I) of Thessaloniki, Thessaloniki, Greece.
- 9) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, Patras, Greece, November 2017.
- 10) “My Trip”, Democritus University, Komotini, Thrace, Greece, November 2017.
- 11) “Theories of Motor Control”, Democritus University, Komotini, Thrace, Greece, November 2017.
- 12) “Applied Optimal Movement Variability: The Nonlinear Approach”, Democritus University, Komotini, Thrace, Greece, November 2017.
- 13) “The reasons of research”, Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 14) “Grant Writing”, Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 15) “Manuscript Writing”, Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 16) “Mentoring”, Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 17) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, Georgia, Athens, Georgia, USA, September 2017.
- 18) The 9<sup>th</sup> Olympiad of the Mind “Variability in Life Can Facilitate Learning to Live Together”, Chania, Crete, Greece, September 2017.
- 19) 25<sup>th</sup> International Congress on Physical Education and Sport (ICPES) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, Democritus University, Komotini, Thrace, Greece, May 2017.
- 20) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, Vrije University, Amsterdam, Holland, May 2017.
- 21) “Development of Hypothesis and how to write a scientific article”, Aristotle University, Thessaloniki, Macedonia, Greece, May 2017.
- 22) “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders”, Kings College London, England, April 2017.
- 23) TEDxUNO talk, The Importance of Variation in Human Movement (<https://www.youtube.com/watch?v=0vjViLFziV4>), Omaha, NE, February 2016.
- 24) Second Technical Seminar of Biomechatronics: Applications to Rehabilitation, “Movement variability and the use of nonlinear tools.” Stergiou, N., January 2016, University of Extremadura, Caceres, Spain.

- 25) Third Annual Meeting Coimbra Health School, “Innovative Analyses of Human Movement.” Stergiou, N., April 2016, Escola Superior de Tecnologia da Saude de Coimbra – Coimbra Health School – A Unversalidade de Coimbra no Ensino da Saude, Coimbra, Portugal.
- 26) II Congresso Fisioterapia da Escola Superior de Saude Dr. Lopes Dias, “Innovative Analyses of Human Movement.” Stergiou, N., April 2016, Escola Superior de Saude Dr. Lopes Dias – Instituto Politecnico de Castelo Branco, Castelo Branco, Portugal.
- 27) Seminario Innovative Analyses of Human Movement Variability: Contributions to the field of Motor Behavior, “Nonlinear Analysis for Human Movement Variability.” April 2016, Laboratorio de Comportamento Motor de Faculdade de Montricidade Humana – University of Lisbon, Lisbon, Portugal.
- 28) Research Seminar, “Harnessing Movement Variability.” November 2016, Walter Reed National Military Medical Center Bethesda MD, USA.
- 29) Second International Conference of Sport Sciences, “A perspective on human movement variability: implications for health and pathology.” November 2016, Aristotle University, Thessaloniki, Greece.
- 30) Second Annual Motion Analysis Research Center Symposium, “Harnessing Movement Variability to Treat and Prevent Motor Related Disorders.” Stergiou, N., November 2016, Samuel Merritt University, Oakland, CA, USA. Symposium, Advanced measures of gait; why, and how, should we (not?) calculate them? Bruijn, S., Stergiou, N., Terrier, P., Ihlen, E., 2015 International Society for Posture and Gait Research, Sevilla, Spain, June 2015.
- 31) Symposium, Structure of Variability as a Window into what Matters during Mobility. Chang, Y.H., Hausdorff, J., Stergiou, N. International Society for Posture and Gait Research, Sevilla, Spain, June 2015.
- 32) Biomechanics, Aging, and Technology: Geromechanics or how Gerontology and Biomechanics come together. University Seminar Series on Aging for the Brunel University, London, England, June 2015
- 33) A Perspective on Human Movement Variability: Implications for health and pathology. Seminar for the Palacký University of Olomouc, Olomouc, Czech Republic, April 2015.
- 34) A Perspective on Human Movement Variability: Implications for health and pathology. Seminar for the Arizona State University, Phoenix, Arizona, January 2014.
- 35) A Perspective on Human Movement Variability: Implications for health and pathology. Seminar for the University of Florida, Gainesville, Florida, March 2014.
- 36) Geromechanics or how Gerontology and Biomechanics come together. Keynote at the Aging with Passion and Purpose Conference: Aging well in an Age of Technology. Omaha, Nebraska, October 2013.
- 37) A Perspective on Human Movement Variability with Applications in Infancy Motor Development. Seminar at National Academy of Kinesiology Annual Meeting, Portland, Oregon, September 2012
- 38) A Perspective on Human Movement Variability: Implications for health and pathology. Keynote at Fifth Conference of the Greek Society of Biomechanics, Thessaloniki, Greece, September 2012.
- 39) Research that Shapes the Future of Health Care. Seminar for the University of Nebraska Foundation. Scottsdale, Arizona, February 2012.
- 40) Human movement variability. Seminar for the University of Nebraska at Lincoln, Department of Mechanical and Materials Engineering. Lincoln, Nebraska, October 2011.

- 41) A perspective on human movement variability. Seminar for the University of Minnesota, Department of Kinesiology. Minneapolis, Minnesota, September 2011.
- 42) Research that Shapes the Future of Health Care. Seminar for the University of Nebraska Foundation. Palm Springs, California, February 2011.
- 43) A perspective in human movement variability. Des Moines University Friday Seminar Series. Des Moines, Iowa, October 2010.
- 44) Research in the Nebraska Biomechanics Core Facility. Seminar for the College of Public Health, Department of Environmental, Agricultural and Occupational Health. Omaha, Nebraska, October 2010.
- 45) Research that shapes the future of health care. Seminar for the University of Nebraska President's Society. Lincoln, Nebraska, May 2010.
- 46) Opportunities in the Nebraska Biomechanics Core Facility. Seminar for the Pre-Health Professionals Club. Omaha, Nebraska, April 2010.
- 47) Research in the Nebraska Biomechanics Core Facility. Seminar for the Department of Biology, spring 2010 Seminar Series. Omaha, Nebraska, March 2010.
- 48) Human Movement variability in neurological sciences. Grand rounds in Neurology. Omaha, Nebraska, October 2009.
- 49) Nebraska Biomechanics Core Facility: Collaborative Research in Action. Clinical and Translational Seminar for the University of Nebraska Medical Center, Omaha, Nebraska, August 2009.
- 50) Human Movement variability in Gait: examples for business related opportunities. Seminar for the Creighton Business School Entrepreneurship Series. Omaha, Nebraska, 2009.
- 51) Human movement variability and occupational health. Seminar for the Department of EAOH Seminar Series given at the College of Public Health, Omaha, Nebraska, December 2008.
- 52) ACL injury and tibial rotation. Keynote at the South Central American Society of Biomechanics Annual Meeting. Odessa, Texas, March 2008.
- 53) Human Movement Variability: Applications for Parkinson's disease. Seminar to the Nebraska Chapter of Parkinson Disease, Support Group. Omaha, Nebraska, March 2008.
- 54) Human Movement Variability: Applications in Robotic Surgery and Motor Development. Seminar for the Biomechanics and Movement Science Interdisciplinary Program at the University of Delaware. Newark, Delaware, February 2008.
- 55) Infant Sitting Postural Control Studies in Omaha. Seminar to the General Pediatric Clinic Departmental Meeting at the University of Nebraska Medical Center. Omaha, Nebraska, February 2008.
- 56) Infant Sitting Postural Control Studies in Omaha. Seminar for the Pediatric Neurology Department at Children's Hospital. Omaha, Nebraska, January 2008.
- 57) Motor Development from a Nonlinear Perspective. Seminar for the University of Michigan Kinesiology Seminar Series, Ann Arbor, Michigan, November 2007.
- 58) A New Theoretical Model for Intervention Strategies. Keynote. Presented at the Second National Research Summit (RS II) on: Early Intervention for Children with or at Risk for Physical Disabilities, This summit was sponsored by the Section on Pediatrics of the American Physical Therapy Association. Alexandria, Virginia, October 2007.
- 59) Research in Geriatrics at the HPER Biomechanics laboratory. Seminar for the Geriatric Research Seminar Series, Omaha, Nebraska, September 2007.

- 60) Exploring variability in human movement through computer simulations. Seminar for the CAST Simulation Symposium held at the UNMC/Nebraska Medical Center, Omaha, Nebraska, June 2007.
- 61) Nonlinear tools provide us with a viable alternative to investigate variability in motor development and control. Keynote for the Motor Development Symposium during the 2007 North American Society for the Psychology of Sport and Physical Activity Conference, San Diego, California, June 2007.
- 62) Human Movement Variability from a Motor Development Perspective. Keynote at the Human Performance and Wellness Meeting, Las Vegas, Nevada, March 2007.
- 63) Exploring variability in human movement: a nonlinear approach. Seminar for the Landon Center on Aging at the University of Kansas Medical School. Kansas City, Kansas, September 2005.
- 64) Exploring variability in human movement. Seminar for the Arizona State University, Tempe, Arizona, March 2005.
- 65) How anterior cruciate ligament deficiency and reconstruction influence tibial rotation. Seminar for the University of Nevada at Las Vegas, Las Vegas, Nevada, November 2004.
- 66) Evaluation of Bio-Rhythms. Seminar for the University of Nevada at Las Vegas, Las Vegas, Nevada, November 2004.
- 67) Human movement variability workshop. Invited lecture at the University of Technology Sydney. Sydney, Australia, February 2011.
- 68) Movement therapy, physiotherapy & skill acquisition. Invited lecture at the Australian Institute of Sport. Canberra, Australia, February 2011.
- 69) Human movement variability for coaches. Invited lecture at the Melbourne Sports Institute. Melbourne, Australia, February 2011.
- 70) Movement variability and the use of nonlinear tools: Principles to guide research in human movement. Keynote Speaker. European Workshop on Movement Science. Lisbon, Portugal, June 2009.
- 71) Past, present and future of non-linear methodology in biomechanics. International Workshop New Trends in Sport Movement Analysis. Instituto de Biomecánica de Valencia, Valencia, Spain, November 2007.
- 72) Motor Coordination. Symposium. Instituto de Biomecánica de Valencia, Valencia, Spain, November 2007.
- 73) Human Movement Variability. Symposium. Instituto de Biomecánica de Valencia, Valencia, Spain, November 2007.
- 74) Methods in nonlinear analysis. Symposium. Instituto de Biomecánica de Valencia, Valencia, Spain, November 2007.
- 75) Using nonlinear tools to answer questions in human movement. Presented at the Department of Exercise and Sport Science of the University of North Carolina at Chapel Hill. Chapel Hill, North Carolina, November 2002.
- 76) Variability issues in Motor Control: Answering questions using nonlinear tools. Presented at the 1st Biomechanics Invitational Seminar of the University of Nevada Las Vegas. Las Vegas, NV, March 2002.
- 77) Nonlinear analysis of postural function in infants. Presented at the 14<sup>th</sup> Congress of the Greek Society of Pediatric Medicine and Health. Thessaloniki, Greece, May 2002.
- 78) Preparation, evaluation, and rehabilitation of athletes. Roundtable. Presented at the 5<sup>th</sup> International Symposium of Arthroscopy and Sports Injuries. Thessaloniki, Greece, June 2001.

- 79) Variability and Chaos. Presented at the Orthopaedic and Athletic Center of Ioannina Medical School. Ioannina, Greece, May 2001.
- 80) The whys and the hows of the single subject analysis. Presented at the Orthopaedic and Athletic Center of Ioannina Medical School. Ioannina, Greece, May 2001.
- 81) Applications of Biomechanics. Presented at the Department of Physical Education of the University of Thessalia. Trikala, Greece, May 2001.
- 82) Improving sports performance in running via prevention of injuries. Presented at the Department of Physical Education of the University of Thessalia. Trikala, Greece, May 2001.
- 83) Gait analysis in sports medicine. Presented at the Annual Symposium of the Greek Association of Arthroscopy and Knee Surgery. Ioannina, Greece, June 2000.
- 84) Differentiation of the functional timing of lower limb movements and its relation to running injuries. Presented at the Fourth International Congress on Physical Education and Sport. Komotini, Greece, May 1996.
- 85) Variability in human movement: applications in health sciences. Presented at the Third Panhellenic Symposium & Eighth Summer School in Complexity and Chaotic Dynamics of Nonlinear Systems. Xanthi, Greece, July 1995.
- 86) Sport shoes and overpronation. Presented at the First Congress of Preventing Medicine in Sports. Athens, Greece, October 1988.

### **Oral Research Presentations International (N = 53)**

- 1) Raffalt P, Vallabhajosula S, Renz J, Mukherjee M, **Stergiou N**, Human Movement variability and falls in the elderly. *8th World Congress of Biomechanics*, Dublin, Ireland July 2018.
- 2) **Stergiou N**, Vaz J, Skiadopoulou A, Human Movement variability and falls in the elderly. *8th World Congress of Biomechanics*, Dublin, Ireland July 2018.
- 3) Sotirakis, H., Kyvelidou A., **Stergiou, N.**, Hatzitaki, V. Aging effects on postural tracking of complex visual motions. *7th International Posture Symposium*, Smolenice Castle, Slovakia, September, 2015.
- 4) Rouffet, D., Taylor, S., **Stergiou, N.** Regulation of pedaling cadence during road-based cycling. *2012 International Society of Biomechanics in Sports*. Melbourne, Australia, July 2012.
- 5) Katsavelis, D. **Stergiou, N.** Nonlinear analysis: Theoretical background and applications. *Invited lecture at the Winter School of Biomechanics*. Sao Paulo, Brazil, July 2009.
- 6) Katsavelis, D. **Stergiou, N.** Movement variability and the use of nonlinear tools: From theory to applications. *Invited lecture at 13th Congress of the Brazilian Society of Biomechanics*. Sao Paulo, Brazil, July 2009.
- 7) Katsavelis, D. **Stergiou, N.** Movement variability in the study of robot-assisted surgery and animal locomotion. *Invited lecture at 13th Congress of the Brazilian Society of Biomechanics*. Sao Paulo, Brazil, July 2009.
- 8) Katsavelis, D. **Stergiou, N.** The future of biomechanics. *Invited lecture at 13th Congress of the Brazilian Society of Biomechanics*. Sao Paulo, Brazil, July 2009.
- 9) Patras, K., Ziogas, G., Ristanis, S., Tsepis, E., **Stergiou, N.**, Georgoulis, A.D. Electromyographic alterations are evident during heavy intensity treadmill running. *14th Annual Congress of the European College of Sports Sciences*. Oslo, Norway, July 2009.

- 10) Patras, K., Ziogas, G., Ristanis, S., Tsepis, E., **Stergiou, N.**, Georgoulis, A.D. Neuromuscular Response of the Reconstructed Leg is diminished during a Heavy Intensity Running Bout. *7th Biennial ISAKOS Congress*. Osaka, Japan, April 2009.
- 11) Georgoulis, A.D., Patras, K., Ziogas, G., Ristanis, S., Tsepis, E., **Stergiou, N.** Effects of exercise intensity on muscle recruitment patterns in anterior cruciate ligament reconstructed soccer players. *Deutscher Kongress für Orthopaedie und Unfallchirurgie*. Berlin, Germany, October 2008.
- 12) Myers, S.A., **Stergiou, N.**, Pipinos, I.I., Johanning, J.M., Blanke, D., Chen S-J. Gait variability is altered in peripheral arterial disease patients prior to the onset of pain. Presented at the *16<sup>th</sup> Congress of the European Society of Biomechanics*. Lucerne, Switzerland, July 2008.
- 13) Filipi, M., Leuschen, P., **Stergiou, N.**, Huisinga, J., Agawral, S., Schmaderer, L., Kucera, D. Impact of Resistance Training on Balance in Multiple Sclerosis. *19<sup>th</sup> International Nursing Research Congress focusing on Evidence –Based Practice*. Singapore, July 2008.
- 14) Ziogas, G., Patras, K., **Stergiou, N.**, Georgoulis, A. Submaximal endurance markers for elite soccer players during preseason testing. *European College of Sports Science*. Estoril, Portugal, July 2008.
- 15) Deffeyes, J.E., Harbourne, R.T., Kyvelidou, A., Stuberg, W.A., **Stergiou, N.** Entropy based assessments of developmental delay in infants learning to sit. Presented at *North American Society for the Psychology of Sport and Physical Activity 2008 Conference*. Niagara Falls, Ontario, Canada, June 2008.
- 16) Huisinga, J. Filipi, M., **Stergiou, N.** Balance in Multiple Sclerosis patients is affected by resistance training. Presented at *North American Society for the Psychology of Sport and Physical Activity 2008 Conference*. Niagara Falls, Ontario, Canada, June 2008.
- 17) Katsavelis, D., Decker, L., Kochi, N., **Stergiou, N.** Effects of optic flow produced by virtual reality on gait variability. Presented at *North American Society for the Psychology of Sport and Physical Activity 2008 Conference*. Niagara Falls, Ontario, Canada, June 2008.
- 18) Kochi, N. **Stergiou, N.**, Cavanaugh, J.T. Detrended Fluctuation Analysis and Entropy Rate reveal motor control strategies in the variability of step activity data. Presented at *North American Society for the Psychology of Sport and Physical Activity 2008 Conference*. Niagara Falls, Ontario, Canada, June 2008.
- 19) Kyvelidou, A., Harbourne, R.T., Deffeyes, J.E., Stuberg, W.A., Shostrom, V.K., **Stergiou, N.** Changes of COP variability across development of sitting posture in typically developing infants. Presented at *North American Society for the Psychology of Sport and Physical Activity 2008 Conference*. Niagara Falls, Ontario, Canada, June 2008.
- 20) Zampeli, F., Ristans, S., Siarava, E., **Stergiou, N.**, and Anastasios D. Georgoulis, A.D. An in vivo examination of the effect of femoral tunnel placement during ACL reconstruction on tibial rotation. *European Society of Sports Traumatology, Knee Surgery, and Arthroscopy*. Porto, Portugal, May 2008.
- 21) Siu, K-C, Lee, I.H., Mukherjee, M., Oleynikov, D., **Stergiou, N.** The Effect of Environmental Noise on Robotic Surgery. Presented at the *3rd Annual Minimally Invasive Robotic Association (MIRA) Meeting, Rome, Rome, Italy, January 2008*.
- 22) Ristanis, S., Chouliaras, V., Moraiti, C., **Stergiou, N.**, Georgoulis, A.D. Current autografts used for ACL Reconstruction do not restore tibial rotation during pivoting. *Presented at the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS) 6<sup>th</sup> Biennial Congress*, Florence, Italy, May 2007.
- 23) Chen, S-J, Huisinga, J.M., Myers, S.A., Radovic, M., Pipinos, I.I., Johanning, J.A., **Stergiou, N.** The Effects of Peripheral Arterial Disease on Gait Stability. Podium presentation at the *XXI Congress of the International Society of Biomechanics*, Taipei, Taiwan, July 2007.



- 24) Deffeyes, J.E., **Stergiou, N.**, Harbourne, R.T., Kyvelidou, A., DeJong, S.L., Stuber, W.A. Sitting Postural Sway Can Assess Severity of Infant Developmental Delay. Podium presentation at the *XXI Congress of the International Society of Biomechanics*, Taipei, Taiwan, July 2007.
- 25) Ristanis, S., Chouliaras, V., Moraiti, C., **Stergiou, N.**, Georgoulis, A.D. Quadrupled Hamstrings Autograft vs Bone-patellar tendon-bone Autograft: Changes in Movement Variability During Walking after Anterior Cruciate Ligament Reconstruction. Presented at the *Orthopedic Research Society 2007* in San Diego, California, March 2007.
- 26) Ristanis, S., Chouliaras, V., Moraiti, C., **Stergiou, N.**, Georgoulis, A.D. The effectiveness of reconstruction of the anterior cruciate ligament with quadrupled hamstrings and bone patellar tendon-bone autografts. An in-vivo study comparing tibial rotation. Presented at the *12<sup>th</sup> ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress* in Innsbruck, Austria, May 2006.
- 27) **Stergiou, N.** New developments of the UNO Biomechanics Laboratory. *Invited lecture at the University of Ioannina Medical Center*, Thessaloniki, Greece, April 2005.
- 28) Georgoulis, A., Ristanis, S., Patras, K., Moraiti, C., Tsepis, E., **Stergiou, N.** Motion analysis evaluation, 2 years after ACL reconstruction, shows that tibial rotation is not restored during high demanding activities. *Presented at the Annual Meeting of Arthroscopy Association of North America*. Vancouver, BC, Canada, May 2005.
- 29) **Stergiou, N.** How to write a scientific paper. Presented at the *Orthopaedic and Athletic Center of Ioannina Medical School*. Ioannina, Greece, July 2004.
- 30) **Stergiou, N.** Proper selection of sport shoes. Presented at the *Orthopaedic and Athletic Center of Ioannina Medical School*. Ioannina, Greece, July 2004.
- 31) Kurz, M.J. **Stergiou, N.** Controlling bifurcation and chaos in a passive dynamic walking model. Presented at the *North American Society for the Psychology of Sport and Physical Activity (NASPSA) annual meeting*. Vancouver, Canada, June 2004.
- 32) Katsavelis, D., **Stergiou, N.**, Korellis, G. The effect of fatigue on running mechanics. Presented at the *12<sup>th</sup> International Congress on Physical Education and Sport*. Komotini, Greece, May 2004.
- 33) Katsavelis, D., Blanke, D., **Stergiou, N.** The value of gait analysis: a bibliographical evaluation. Presented at the *12<sup>th</sup> International Congress on Physical Education and Sport*. Komotini, Greece, May 2004.
- 34) Ristanis, S., Giakas, G., Basileiadis, H., Patras, K., **Stergiou, N.**, Georgoulis, A.D. Tibial rotation remains a problem one year after ACL reconstruction during high demanding activities. Presented at the *11<sup>th</sup> ESSKA Congress and 4th World Congress on Sports Trauma*. Athens, Greece, May 2004.
- 35) Moraiti, T., **Stergiou, N.**, Giakas, G., Andrikoula, S., Ristanis, S., Georgoulis, A.D. The effect of ACL deficiency on gait chaotic dynamics under different walking speeds. Presented at the *11th ESSKA Congress and 4th World Congress on Sports Trauma*. Athens, Greece, May 2004.
- 36) Ristanis, S., Giakas, G., Moraiti, T., **Stergiou, N.**, Georgoulis, A.D., Soucacos, P.N. Internal-External Rotation of the Knee Joint after ACL Reconstruction. Presented at the *VII<sup>th</sup> International Olympic Committee (IOC) World Congress on Sport Sciences*. Athens, Greece, October 2003.
- 37) Moraiti, T., **Stergiou, N.**, Giakas, G., Ristanis, S., Soucacos, P.N., Georgoulis, A.D. Assessment of the alterations in gait patterns caused by ACL deficiency using non-linear dynamics. Presented at the *VII<sup>th</sup> International Olympic Committee (IOC) World Congress on Sport Sciences*. Athens, Greece, October 2003.
- 38) Ristanis, S., Giakas, G., Moraiti, T., Siarava, E., Papageorgiou, C.D., **Stergiou, N.**, Chouliaras, V., Georgoulis, A. The effect of ACL reconstruction on the internal-external rotation of the knee joint.

- Presented at the 2003 ISAKOS Congress (*International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine*). Auckland, New Zealand, March 2003.
- 39) **Stergiou, N.** Variability in human movement: theory and applications. Presented at the *Department of Science in Physical Education and Sports of the Aristotle University*. Thessaloniki, Greece, May 2003.
  - 40) **Stergiou, N.** Various research topics from the HPER Biomechanics Laboratory. Presented at the *Orthopaedic and Athletic Center of Ioannina Medical School*. Ioannina, Greece, January 2003.
  - 41) Kurz, M.J., **Stergiou, N.**, McCormick, K. Markov model suggests neuromuscular aging affects short range correlations present in the gait cycle. Presented at the *IV<sup>th</sup> World Congress of Biomechanics*. Calgary, CA, August 2002.
  - 42) Papadonikolakis, A., Papageorgiou, C.D., Moebius, U.G., Tokis, A.V., Tsepi, E., **Stergiou, N.**, Giakas, G., Georgoulis, A.D. Electromechanical delay of the knee extensor muscles after harvesting the medial third of the patellar tendon as a bone patella tendon bone graft for anterior cruciate ligament reconstruction. *Presented in the Annual Meeting of the European Society of Sports Traumatology Knee surgery and Arthroscopy (ESSKA)*. Rome, Italy, April 2002.
  - 43) Georgoulis, A., Papadonikolakis, A., Papageorgiou, C.D., Giakas, G., Tsepi, E., Tokis, A.V., **Stergiou, N.**, Soucacos, P.N. Electromechanical delay of the knee extensor muscles after harvesting the medial third of the patellar tendon as a graft for anterior cruciate ligament reconstruction. *Presented at the 5<sup>th</sup> Corso Internazionale, Ortopedia, Biomeccanica e Riabilitazione Sportiva*. Assisi, Perugia, Italy, December 2001.
  - 44) Georgoulis, A.D., Papadonikolakis, A., Papageorgiou, C.D., Giakas, G., **Stergiou, N.**, Soucacos, P.N. Kinematic patterns of the knee joint after ACL injury and reconstruction. Presented at the *5<sup>th</sup> Corso Internazionale, Ortopedia, Biomeccanica e Riabilitazione Sportiva*. Assisi, Perugia, Italy, December 2001.
  - 45) Georgoulis, A.D., Papadonikolakis, A., Papageorgiou, C.D., Giakas J., **Stergiou, N.** Kinematic patterns of the knee joint after ACL injury and reconstruction. Presented at the *1<sup>st</sup> Icelandic Conference on Arthroscopy and Sports Medicine*. Reykjavik, Iceland, August 2001.
  - 46) Papadonikolakis, A., Georgoulis, A., Kosta J., Zacharis, K., **Stergiou, N.** & Soucacos, P.N. Kinematic patterns before and after ACL reconstruction. Presented at the *9<sup>th</sup> Congress of the European Society of Sports Traumatology, Knee Surgery, and Arthroscopy*. London, England, September 2000.
  - 47) **Stergiou, N.** Werner, S. Evaluation and rehabilitation of the injured athlete. A workshop in Gait Analysis, Dynamometer and Proprioception. Presented at the *Annual Symposium of the Greek Association of Arthroscopy and Knee Surgery*. Ioannina, Greece, June, 2000. Ioannina, Greece, June 2000.
  - 48) Bates, B.T., **Stergiou, N.**, Crusemeyer, J.A. Timing of lower extremity joint actions during treadmill running. Presented at the *ASICS Australasian Podiatry Conference*. Methven, New Zealand, August 1999.
  - 49) Kurz, M.J., **Stergiou, N.** (1999). The influence of footwear and shoe hardness on lower extremity intralimb coordination strategies. Presented at the *Fourth Symposium on Footwear Biomechanics*. Canmore, Canada, August 1999.
  - 50) **Stergiou, N.**, Bates, B.T. Intralimb coordination and its importance as a running injury mechanism. Presented at the *Fourth International Congress of the Northern Greece Sports Medicine Association*. Thessaloniki, Greece, June 1997.
  - 51) **Stergiou, N.**, Bates, B.T. Running impact force modeling. Presented at the *Eighth Biennial Conference of the Canadian Society for Biomechanics*. Calgary, Alberta, Canada, August 1994.

- 52) Crussemeyer, J.A., **Stergiou, N.**, Bates, B.T. Surface effects on impact force attenuation. Presented at the *Eighth Biennial Conference of the Canadian Society for Biomechanics*. Calgary, Alberta, Canada, August 1994.
- 53) Bates B.T., **Stergiou, N.** Relationship between subtalar and knee joint function during running on different surfaces. Presented at the *XIV<sup>th</sup> International Society of Biomechanics Congress*. Paris, France, July 1993.

### **Oral Research Presentations National (N = 134)**

- 1) Vaz JR, Rand T, Fujan-Hansen J, Mukherjee M, **Stergiou N.** Auditory and visual external cues have different effects on spatial but similar effects on temporal gait variability., *42nd Annual Meeting of the American Society of Biomechanics*, August 2018.
- 2) Papachatzis N, Rock CG, **Stergiou N**, Takahashi KZ. Effects of unilateral push-off deficiency on stride-to-stride fluctuations during human walking. *American Society of Biomechanics Annual Conference*, Raleigh, NC, August 2016.
- 3) **Stergiou, N.** Update on Biomechanics and the upcoming addition to the building. UNO Alumni House, Omaha, Nebraska, USA. May 2018.
- 4) Kent JA, Papachatzis N, Vanderheyden T, **Stergiou N**, Takahashi KZ. Delivery of vibration to the residual limb via the prosthetic socket: Preliminary investigation of signal integrity. *Rocky Mountain American Society of Biomechanics*, Estes Park, CO, April 2016.
- 5) Schieber, M, Hasenkamp, RM, **Stergiou, N**, Johanning, JM, Pipinos, II, Myers, SA. Muscular strength and control characteristics at the ankle are altered by peripheral artery disease. *Midwestern Vascular Annual Meeting*, Columbus, OH, August 2016.
- 6) **Stergiou N.** Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. *Surgery Research Forum*, University of Nebraska Medical Center, Omaha, NE, January 2016.
- 7) **Stergiou N.** UNO Biomechanics Resources. *Traumatic Brain Injury Retreat*, University of Nebraska Medical Center, Omaha, NE, December 2016.
- 8) **Stergiou N.** Biomechanics, Aging, and Technology: Geromechanics or How Gerontology and Biomechanics come together. *Division of Geriatric Medicine Research Seminar*, University of Nebraska Medical Center, Omaha, NE, October 2016.
- 9) **Stergiou, N.** Complexity in aging. *National Academy of Kinesiology Annual Conference*, Philadelphia, PA, September, 2015.
- 10) Stoffregen, T., Munafo, J. Wade, M., **Stergiou, N.** The Rim and the Ancient Mariner: The Nautical Horizon and Older Adults. *56th Annual Meeting of the Psychonomic Society*, Minneapolis, MN, November, 2015.
- 11) Kent, J.A., **Stergiou, N.**, Wurdeman, S.R. Does dynamic balance of transtibial amputees' change after a three week adaptation period on a new prosthetic foot? *American Society of Biomechanics Annual meeting*, Columbus, OH, August, 2015.
- 12) **Stergiou, N.** Research in the Biomechanics Research Building. *Surgery Research Forum. Regenerative Medicine Program. University of Nebraska Medical Center.* Omaha, NE, February, 2014.
- 13) Haworth, J., Kyvelidou, A., **Stergiou, N.** Indifference to chaotic motion may relate to social disinterest in children with autism. *Annual North American Society for the Psychology of Sport and Physical Activity Meeting*, Minneapolis, MN, June, 2014.

- 14) **Stergiou, N.** A Perspective on Human Movement Variability: Implications for Health and Pathology. *Vestibular Workshop. Balancing on the Edge: Current Knowledge of Vestibular Function. Boys Town National Research Hospital*, Omaha, NE, September, 2014.
- 15) Kyvelidou, A., **Stergiou, N.** Nonlinear dynamics and motor control: Where have we been, where are we now and where are we going? Nonlinear dynamics framework to identify motor deficits in clinical populations. *Annual North American Society for the Psychology of Sport and Physical Activity Meeting*. New Orleans, LA, June 2013.
- 16) Qiao, M., **Stergiou, N.**, Mukherjee, M. Effects of Visual Flow Speed and Medio-Lateral Restriction on the Variability during Walking. *37<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, Omaha, NE, September 2013.
- 17) Huang, C.K., Chien, J.H., Myers, S.A., Mukherjee, M., **Stergiou, N.** Effect of tactile stimuli on locomotor rhythm depends on the characteristics of tactile signal. *American Society of Gravitational and Space Research 28<sup>th</sup> Annual Meeting*. New Orleans, LA, USA, November 2012.
- 18) Hunt, N., Haworth, J.L., McGrath, D., Myers, S.A., **Stergiou, N.** Manipulation of the structure of gait variability with rhythmic auditory stimulus. *36<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Gainesville, FL, USA, August 2012.
- 19) McGrath, D., Doheny, E.P., Walsh, L., McKeown, D., Cunningham, C., Crosby, L., Kenny, R.A., **Stergiou, N.**, Caulfield, B., Greene, B.R. Taking balance measurement out of the laboratory and into the home: Discriminatory capability of novel centre of pressure measurement in fallers and non-fallers. *34<sup>th</sup> Annual International Conference of the IEEE Engineering in Medicine & Biology Society*. San Diego, CA, USA, August 2012.
- 20) Vallabhajosula, S., Mukherjee, M., **Stergiou, N.** Effect of tactile perturbation on blindfolded circular navigation. *36<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Gainesville, FL, USA, August 2012.
- 21) Wurdeman, S.R., Yentes, J.M., Myers, S.A., Jacobsen, A.L., **Stergiou, N.** Both limbs in unilateral transtibial amputees display increased risk for tripping. *36<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Gainesville, FL, USA, August 2012.
- 22) Haworth, J., Hunt, N., Yu, Y., **Stergiou, N.** Gaze and postural coupling to visual stimulus oscillations of complex motion organization. *Society for Chaos Theory in Psychology and Life Sciences 2012 Meeting*. Baltimore, MD, USA, July 2012.
- 23) Yu, Y., Haworth, J., Harbourne, R.T., **Stergiou, N.** Sitting postural sway enhances reaching in infancy. *Annual North American Society for the Psychology of Sport and Physical Activity Meeting*. Honolulu, HI, USA, June 2012.
- 24) Korgan, W., Wurdeman, S.R., Yentes, J.M., **Stergiou, N.** Reduced vertical displacement of body's center of mass coincides with increased metabolic energy expenditure. *17<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting*. Grand Rapids, MI, USA, May 2012.
- 25) Yentes, J.M., Huisinga, J.M., Filipi, M.L., **Stergiou, N.** Clinical and biomechanical measures of balance in multiple sclerosis. *Proceedings of the 17<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting*. Grand Rapids, MI, USA, May 2012.
- 26) Hasenkamp, R., Yentes, J.M., Wurdeman, S.R., **Stergiou, N.**, Johanning, J.M., Pipinos, I.I., Myers, S.A. Plantarflexor strength is related with plantarflexor power during claudication in patients with peripheral arterial disease. *17<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting*. Grand Rapids, MI, USA, May 2012.
- 27) Korgan, W., **Stergiou, N.** Effects of altered potential energy during gait: Implications of center of mass displacement in space flight. *Nebraska Academy of Sciences Annual Meeting*. Lincoln, Nebraska, USA, April 2012.

- 28) Haworth, J., Vallabhajosula, S., **Stergiou, N.** Gaze and postural coupling to visual stimulus motion of various frequency structure. *Nebraska Academy of Sciences Annual Meeting*. Lincoln, Nebraska, USA, April 2012.
- 29) Davidson, A.J., Chien, J.H., Mukherjee, M., Huang, C.K., Myers, S., Siu, K.C., **Stergiou, N.** Dynamic Postural Control Using the Locomotor Sensory Organization Test. *Nebraska Academy of Sciences Annual Meeting*. Lincoln, Nebraska, USA, April 2012.
- 30) Wurdeman, S.R., Myers, S.A., Jacobsen, A.L., **Stergiou, N.** The Lyapunov exponent is strongly related to amputee preference. *American Academy of Orthotists & Prosthetists 2012 Annual Scientific Meeting and Symposium*. Atlanta, GA, USA, March 2012.
- 31) Dusing, S., Galloway, J.C., **Stergiou, N.**, Thacker, L. Postural control during early arm movements in the first months of life. For oral presentation at *APTA Combined Sections Meeting 2011*, New Orleans, Louisiana, February 2011.
- 32) Haworth, J.L., Cignetti, F., Kokkoni, E., Harbourne, R.T., **Stergiou, N.** Beneficial effect of perceptual-motor intervention with surface vibrations on postural function of infants with cerebral palsy. *North American Society for the Psychology of Sport and Physical Activity*, Burlington, Vermont, June 2011.
- 33) Huben, N.B., Yentes, J.M., Koutakis, P., Myers, S.A., Johanning, J.M., Pipinos, I.I., **Stergiou, N.** Joint kinetics are independent of level of disease in peripheral arterial disease patients. *2011 National Conference on Undergraduate Research*, Ithaca, New York, April 2011.
- 34) Huben, N.B., Yentes, J.M., Myers, S.A., Pipinos, I.I., **Stergiou, N.**, Johanning, J.M. The effect of revascularization on spatio-temporal gait parameters in patients with symptomatic peripheral arterial disease. *2011 National Conference on Undergraduate Research*, Ithaca, New York, April 2011.
- 35) Huisinga, J.M., Filipi, M.L., Hasenkamp, R., Kaipust, J.P., **Stergiou, N.** Effects of exercise on gait outcomes in patients with multiple sclerosis. *North American Society for the Psychology of Sport and Physical Activity*, Burlington, Vermont, June 2011.
- 36) Huisinga, J.M., Yentes, J.M., Kaipust, J.P., Filipi, M.L., **Stergiou, N.** Patients with MS exhibit increased predictability during gait and posture tasks. *North American Society for the Psychology of Sport and Physical Activity*, Burlington, Vermont, June 2011.
- 37) McGrath, M.L., Padua, D.A., **Stergiou, N.**, Blackburn, J.T., Lewek, M.D., Giuliani, C. Changes in lower extremity movement patterns during fatiguing exercise. *National Athletic Trainers' Association Annual Meeting and Clinical Symposium*. New Orleans, Louisiana, 2011.
- 38) Mukherjee M., Koutakis P., Fayad P., **Stergiou N.** Augmented visual feedback affects endpoint stiffness control in chronic stroke survivors during learning of reaching movements in a dynamic environment. *International Stroke Conference*, Los Angeles, California, February 2011.
- 39) Myers, S.A., **Stergiou, N.**, Johanning, J.M., Pipinos, I.I. The effect of age and vascular occlusion on gait variability. *2011 Alliance for Health, Physical Education, Recreation, and Dance National Convention and Exposition*. San Diego, California, March 2011.
- 40) Sosnoff, J., **Stergiou, N.**, Huisinga, J., van Emmerik, R., Busa, M. Multiple sclerosis and postural and gait dysfunction. Conference symposium. *North American Society for the Psychology of Sport and Physical Activity*, Burlington, Vermont, June 2011.
- 41) Wurdeman, S.R., Huben, N.B., **Stergiou, N.** Variability of gait is dependent on direction of motion. *2011 American Society of Biomechanics Annual Meeting*, Long Beach, California, August 2011.
- 42) Wurdeman, S.R., Huben, N.B., Myers, S.A., Johanning, J.M., Pipinos, I.I., **Stergiou, N.** The affected limb in unilateral peripheral arterial disease patients influences the work of the unaffected limb.

- Gait & Clinical Movement Analysis Society 2011 Annual Scientific Meeting*, Bethesda, Maryland, April 2011.
- 43) Yentes, J.M., Rennard, S.I., **Stergiou, N.** Chronic obstructive pulmonary disease does affect gait. *2011 Midwest Student Biomedical Research Forum*, Omaha, Nebraska, February 2011.
  - 44) Yentes, J.M., Rennard, S.I., **Stergiou, N.** Chronic obstructive pulmonary disease does affect gait. Mini Symposium Presentation. *American Thoracic Society 2011 International Conference*, Denver, Colorado, May 2011.
  - 45) Huben, N.B., **Stergiou, N.**, Johanning, J.M. A review of basic temporal and spatial gait parameters in patients with peripheral arterial disease. *2010 Great Plains Honors Council Annual Conference*, Tulsa, Oklahoma, 2010.
  - 46) Thompson, C., Koutakis, P., Kim, H., Leech, K., Jayaraman, A., **Stergiou, N.**, Hornby, T.G. Objective measures of community mobility in persons with SCI: Preliminary results from the MAPS project. *APTA Combined Sections Meeting 2011*, New Orleans, Louisiana, February 2011.
  - 47) Westcott, J.M., Wurdeman, S.R., Myers, S.A., **Stergiou, N.**, Pipinos, I.I., Johanning, J.M. Location of claudication pain does not accurately reflect gait impairment in peripheral arterial disease patients. *6th Annual Academic Surgical Congress*. Huntington Beach, California, February 2011.
  - 48) Cignetti, F., Kyvelidou, A., Harbourne, R.T., **Stergiou, N.** Coordination and nonlinear dynamics in the development of infant sitting postural control. *2010 North American Society for the Psychology of Sport and Physical Activity Annual conference*. Tucson, Arizona, June 2010.
  - 49) Fosnaugh, E., Decker, L.M., Myers, S.A., **Stergiou, N.** Dual tasking indicates elderly inability to delegate locomotion to lower levels of control. *2010 North American Society for the Psychology of Sport and Physical Activity Annual conference*. Tucson, Arizona, June 2010.
  - 50) Haworth, J., Harbourne, R., **Stergiou, N.** Nonlinear dynamics in infant sitting postural control under distorted visual and proprioceptive information. *North American Society for the Psychology of Sport and Physical Activity Annual Conference*. Tucson, Arizona, June 2010.
  - 51) Harbourne, R., Haworth, J., Kyvelidou, A., **Stergiou, N.** Eye and head tracking and sitting postural control in typical infants and infants with neuromotor delays. *2010 North American Society for the Psychology of Sport and Physical Activity Annual conference*. Tucson, Arizona, June 2010.
  - 52) Huben, N.B., **Stergiou, N.**, Johanning, J.M. A review of basic temporal and spatial gait parameters in patients with peripheral arterial disease. *2010 Great Plains Honors Council Annual Conference*. Tulsa, Oklahoma, March 2010.
  - 53) Huben, N.B., Yentes, J.M., Myers, S.A., Pipinos, I.I., **Stergiou, N.**, Johanning, J.M. Spatial and temporal gait parameters are not improved after revascularization in symptomatic PAD patients. *34<sup>th</sup> Annual Midwestern Vascular Surgical Society Meeting*. Indianapolis, Indiana, September 2010.
  - 54) Huisinga, J.M., **Stergiou, N.** Elliptical exercise improves walking mechanics in Multiple Sclerosis patients. *2010 American Society of Biomechanics Annual Meeting*. Providence, Rhode Island, August 2010.
  - 55) Johanning, J.M., Myers, S.A., Pipinos, I.I., **Stergiou, N.** Vascular occlusion changes gait variability patterns of young individuals. *5th Annual Academic Surgical Congress*. San Antonio, Texas, February 2010.
  - 56) Koutakis, P., Katsavelis, D., Myers, S.A., Johanning, J.M., Pipinos, I.I., **Stergiou, N.** Walking velocity does not affect joint powers in peripheral arterial disease. *15<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting*. Miami, Florida, May 2010.
  - 57) Myers, S.A., Decker, L.M., Potter, J.F., **Stergiou, N.** Auditory stimulus alters step width, but not step length gait characteristics of healthy young and elderly individuals. *North American Society for*

- the Psychology of Sport and Physical Activity Annual Conference*. Tucson, Arizona, June 2010.
- 58) Mukherjee, M., Siu, K-C, Wilson, T.W., Liu, W., Fayad, P., **Stergiou, N.** The effect of augmented visual feedback on motor learning of reaching movements in novel dynamic environments in chronic stroke survivors. *International Stroke Conference*. San Antonio, Texas, February 2010.
  - 59) Koutakis, P., Yentes, J.M., Myers, S.A., Kaipust, J.P., Johanning, J.M., Pipinos, I.I., **Stergiou, N.** Lower extremity kinetics are altered in patients with unilateral Peripheral Arterial Disease. *14<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting*. Denver, Colorado, March 2009.
  - 60) Huisinga, J.M., Filipi, M., **Stergiou, N.** Resistance training alters joint moments and powers in Multiple Sclerosis patients independent of disease severity. *14th Annual Gait and Clinical Movement Analysis Society Meeting*. Denver, Colorado, March 2009.
  - 61) Dusing, S.C., Kyvelidou, A., Mercer, V.S., **Stergiou, N.** Movement variability in pre-term and full-term infants at term age. *American Physical Therapy Association Combined - Sections Meeting*. Las Vegas, Nevada, February 2009.
  - 62) Mukherjee, M., Siu, K.C., Suh, I.H., Andrew, K., Oleynikov, D., **Stergiou, N.** A virtual reality training program for improvement of robotic surgical skills. *Medicine Meets Virtual Reality (MMVR) 17 Conference*. Long Beach, California, January 2009.
  - 63) Suh, I.H., Siu, K.C., Mukherjee, M., Monk, E., Oleynikov, D., **Stergiou, N.** Consistency of performance of robot-assisted surgical tasks in virtual reality. *Medicine Meets Virtual Reality (MMVR) 17 Conference*. Long Beach, California, January 2009.
  - 64) Ristanis, S., Siarava, E., **Stergiou, N.**, Georgoulis, A.D. An in-vivo examination of the effect of femoral tunnel placement during ACL reconstruction on tibial rotation. *North American Conference on Biomechanics*. Ann Arbor, Michigan, August 2008.
  - 65) Patras, K., Ziogas, G., Ristanis, S., **Stergiou, N.**, Georgoulis, A. Effect of exercise intensity on EMG amplitude during treadmill running. *American College of Sports Medicine*. Indianapolis, Indiana, May 2008.
  - 66) Ristanis, S., Siarava, E., **Stergiou, N.** Georgoulis, A.D. An in-vivo examination of the effect of femoral tunnel placement during ACL reconstruction on tibial rotation. *Fourth North American Congress on Biomechanics (NACOB 2008)*, Ann Arbor, Michigan, August 2008.
  - 67) Deffeyes, J.E., Kochi, N., Harbourne, R.T., Kyvelidou, A., Stuberg, W.A., **Stergiou, N.** Nonlinear detrended fluctuation analysis of sitting center-of-pressure data as an early measure of motor development pathology in infants. *Society for Chaos Theory in Psychology and the Life Sciences (SCTPLS) Convention*, Richmond, Virginia, August 2008.
  - 68) Lee, I.H., Siu, K-C, Mukherjee, M., Oleynikov, D., **Stergiou, N.** A novel training program for learning robot-assisted surgery. *International Student Forum 2008*. Omaha, Nebraska, June 2008.
  - 69) Johanning, J.M., Myers, S.A., Longo, G.M., Lynch, T.G., Koutakis, P., Celis, R., **Stergiou, N.**, Pipinos, I.I. Persistent gait deficits following successful revascularization in patients with peripheral arterial disease. *2008 Vascular Annual Meeting*. San Diego, CA. June 2008.
  - 70) Johanning, J.M., Celis, R.I., Myers, S.A., Pipinos, I.I., Radovic, M., **Stergiou, N.**, Chen, S., Keller, B.K., Potter, J.F. Significant reduction in performance of timed up and go in both young and elderly patients with symptomatic peripheral arterial disease: Implications for research and clinical practice. *American Geriatrics Society 2008 Annual Meeting 2008*. Washington, D.C., April 2008.
  - 71) Brown-Clerk, B., Siu, KC, Katsavelis, D., Lee, I.H., Oleynikov, D., **Stergiou, N.** Validating Advanced Robot-Assisted Laparoscopic Training Task in Virtual Reality. Podium presentation at the *Medicine Meets Virtual Reality (MMVR) 16 Conference*, Long Beach, California, January 2008.
  - 72) Kyvelidou, A., Stuberg, W.A., Harbourne, R.T., DeJong, S.L., Sun, J., **Stergiou, N.** Reliability of center of pressure measurements during sitting in typically developing infants. Podium

- presentation at the 2008 *American Physical Therapy Association Combined Sections Meeting*, Nashville Tennessee, February 2008.
- 73) Kyvelidou, A., Stuberg, W.A., Harbourne, R.T., DeJong, S.L., Deffeyes, J.E., **Stergiou, N.** Quantity and quality of COP variability changes across sitting development of typically developing infants. Podium presentation at the 2008 *American Physical Therapy Association Combined Sections Meeting*, Nashville, Tennessee, February 2008.
  - 74) **Stergiou, N.** Human Movement Variability. *Invited lecture at the University of Ioannina Medical Center*, Thessaloniki, Greece, December 2007.
  - 75) Celis, R., Pipinos, I., **Stergiou, N.**, Myers, S., Huisinga, J., Lynch, T., Johanning, J. Gait abnormalities are present prior to the onset of claudication in both young and old claudicants. Podium presentation at the *American College of Surgeons 93<sup>rd</sup> Annual Clinical Congress*, New Orleans, Louisiana, October 2007.
  - 76) **Stergiou, N.** Motor Development from a variability standpoint. *Invited Guest Lecture for Dr. Max Kurz's class at the University of Houston, Texas via Video Teleconference*, Omaha, Nebraska, July 2007.
  - 77) Wutzke, C.J., **Stergiou, N.**, Pipinos, I.I., Johanning, J.M., Threlkeld, A.J. Gait Adaptability in People with Unilateral Trans-tibial Amputations in Response to Variable Walking Speed and Body Weight Support. Presented at the *American Society of Biomechanics 2007 Annual Meeting*, Stanford, California, August 2007.
  - 78) Harbourne, R.T., **Stergiou, N.** Nonlinear Analysis Techniques in Motor Development. *Motor Development Symposium at the 2007 North American Society for the Psychology of Sport and Physical Activity Conference*, San Diego, California, June 2007. Co-organizer.
  - 79) Harbourne, R.T., Deffeyes, J.E., DeJong, S.L., Stuberg, W.A., Kyvelidou, A., **Stergiou, N.** Discriminant analysis and nonlinear variables used to identify postural control deficits in infants. Presented at the *Motor Development Symposium during the 2007 North American Society for the Psychology of Sport and Physical Activity Conference*, San Diego, California, June 2007.
  - 80) Smith, B.A., **Stergiou, N.**, Ulrich, B.D. A comparison of two surrogation algorithms to investigate stability and periodicity in toddler gait. Presented at the *Motor Development Symposium during the 2007 North American Society for the Psychology of Sport and Physical Activity Conference*, San Diego, California, June, 2007
  - 81) Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Stuberg, W.A., Kyvelidou, A., **Stergiou, N.** Severity of Infant Developmental delay can be assessed using variability measures of sitting postural sway. Presented at the *2007 North American Society for the Psychology of Sport and Physical Activity Conference*, San Diego, California, June 2007.
  - 82) Kyvelidou, A., Harbourne, R.T., DeJong, S.L., Stuberg, W.A., **Stergiou, N.** Postural control in typically developing infants and adults during sitting. Presented at the *2007 North American Society for the Psychology of Sport and Physical Activity Conference*, San Diego California, June 2007.
  - 83) Kochi, N., **Stergiou, N.**, Cavanaugh, J.T. Linear and nonlinear measures of variability in step activity data reveal motor control strategies employed by relatively active and inactive older adults. Presented at the *2007 North American Society for the Psychology of Sport and Physical Activity Conference*, San Diego California, June 2007.
  - 84) Myers, S.A. **Stergiou, N.** Gait adaptations in persons experiencing claudication. *Proceedings of the Annual Meeting of the Nebraska Academy of Sciences Aeronautics & Space Science Section*, Lincoln, Nebraska, April 2007.



- 85) Siu, K-C., Brown-Clerk, B., Katsavelis, D., Lee, I.H., Oleynikov, D. **Stergiou, N.** Validated robotic laparoscopic surgical training in virtual reality environment. Presented at the *2007 SAGES Scientific Sessions (Society of American Gastrointestinal and Endoscopic Surgeons)*, Las Vegas, Nevada, April 2007.
- 86) Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., & Stuber, W.A., Kyvelidou, A., **Stergiou, N.** Nonlinear measures of neuromuscular control of sitting posture in infants. Presented at *Neuroscience 2006*, Atlanta, Georgia, October 2006.
- 87) Judkins, T.N., Oleynikov, D., **Stergiou, N.** Robotic surgery and training: Does Augmented feedback help retain performance? Presented at the *30<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, Blacksburg, Virginia, September 2006.
- 88) Ristanis, S., Chouliaras, V., Moraiti, C., **Stergiou, N.**, Georgoulis, A.D. Current autografts used for ACL Reconstruction do not restore tibial rotation during pivoting. Presented at the *30<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, Blacksburg, Virginia, September 2006.
- 89) Harbourne, R.T., **Stergiou, N.**, Deffeyes, J.E., DeJong, S.L., Stuber, W.A. Motor learning interventions for the development of sitting postural control and use of nonlinear measures. Presented at the *North American Society for the Psychology of Sport and Physical Activity 2006 Conference*, Denver, Colorado, June 2006.
- 90) Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., & Stuber, W.A., Kyvelidou, A., **Stergiou, N.** Variability in sitting posture in infants: Implications for learning postural control. Presented at the *North American Society for the Psychology of Sport and Physical Activity 2006 Conference*, Denver, Colorado, June 2006.
- 91) Kurz, M.J., **Stergiou, N.** Do horizontal forces influence the structure of chaotic gait patterns? Presented at the *North American Society for the Psychology of Sport and Physical Activity 2006 Conference*, Denver, Colorado, June 2006.
- 92) Thigpen, C.A., Padua, D.A., **Stergiou, N.**, Karas, S.G. Three dimensional coordination analyses of scapulohumeral motion between subjects with and without multidirectional shoulder instability. Presented at the *Combined Sections Meeting of the American Physical Therapy Association*, San Diego, California, February 2006.
- 93) Judkins, T.N., Oleynikov, D., **Stergiou, N.** Real-time augmented feedback benefits robotic laparoscopic training. Presented at *Medicine Meets Virtual Reality 14 Conference*, Long Beach, California, January 2006.
- 94) Robinson, L., Scott-Pandorf, M.M., **Stergiou, N.**, Johanning, J.M., Judkins, T.N., Lynch, T.G., & Pipinos, I.I. Claudication produces abnormal and inefficient gait patterns detectable by advanced biomechanical analyses. Presented at the *Midwestern Vascular 2005, the 29<sup>th</sup> Annual Meeting of the Society*, Chicago, Illinois, September 2005.
- 95) Kurz, M.J., **Stergiou, N.**, Bloomberg, J., & Miller, D. Does Gravity influence the structure of chaotic gait patterns? Presented at the *XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, Cleveland, Ohio, August 2005.
- 96) Ryland, K., Wutzke, C., **Stergiou, N.** Nonlinear analysis of postural control in different positions and vision conditions. Presented at the *XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, Cleveland, Ohio, August 2005.
- 97) **Stergiou, N.** Harbourne, R.T. Investigation of the dynamics of development of sitting postural control in infants with cerebral palsy. Presented at the *III Step Conference*, Salt Lake City, Utah, July 2005.

- 98) Ryland, K., Wutzke, C., **Stergiou, N.** Nonlinear Analysis of Postural Control in Different Positions and Vision Conditions. *Presented at the Heartland Biomedical Engineering Symposium*, Omaha, Nebraska, April 2005.
- 99) Scott-Pandorf, M. Pipinos, I.I., Robinson, L., Judkins, T., **Stergiou, N.** The effect of peripheral arterial disease on gait. *Presented at the Heartland Biomedical Engineering Symposium*, Omaha, Nebraska, April, 2005.
- 100) Kurz, M.J., **Stergiou, N.**, Bloomberg, J. Gravitational forces influence the local dynamic stability of human gait patterns. *Presented at the 2005 Annual Meeting of the Nebraska Academy of Sciences Aeronautics & Space Science Section*, Lincoln, Nebraska, April 2005.
- 101) Moraiti, T., **Stergiou, N.**, Giakas, G., Mitsou, A., Georgoulis, A. How does the ACL deficient knee behave in different walking speeds? *5<sup>th</sup> Biennial Congress of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS)*. Hollywood, Florida, April 2005.
- 102) Ristanis, S., **Stergiou, N.**, Patras, K., Vasiliadis, H., Giakas, G., Georgoulis, A. Tibial rotation remains a problem after ACL reconstruction, during high demanding activities, even though anterior tibial drawer is diminished. *Presented at the 5<sup>th</sup> Biennial Congress of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS)*. Hollywood, Florida, April 2005.
- 103) Narazaki, K., Oleynikov, D., DiMartino, A., Rentschler, M., **Stergiou, N.** Objective quantification of proficiency in robotic laparoscopy with bimanual inanimate tasks. *Presented at the 13<sup>th</sup> Annual Medicine Meets Virtual Reality Conference*, Long Beach, California, January 2005.
- 104) Scott-Pandorf, M.M., Pipinos, I.I., **Stergiou, N.** The effect of peripheral arterial disease on gait: Unilateral patients affected and nonaffected legs. *Presented at the American Society of Biomechanics Upper Midwest Regional Meeting*, Minneapolis, Minnesota, November 2004.
- 105) Kurz, M.J., **Stergiou, N.**, Blanke, D. Does footwear influence the structure of chaotic gait patterns? *Presented at the 28<sup>th</sup> Annual Meeting of the American Society of Biomechanics*. Portland, Oregon, September 2004.
- 106) Narazaki, K., Oleynikov, D., Dimartino, A., Zebrowski, B.K., Shah, S., **Stergiou, N.** Objective assessment of proficiency in robotic laparoscopy. *Presented at the 17<sup>th</sup> Annual Nebraska Biomedical Engineering Workshop*, Lincoln, Nebraska, May 2004.
- 107) Kurz, M.J., **Stergiou, N.** A parallel distributed processing network that utilizes a chaotic control scheme for stable locomotion. *Presented at the 17<sup>th</sup> Annual Nebraska Biomedical Engineering Workshop*, Lincoln, Nebraska, May 2004.
- 108) Kurz, M.J., **Stergiou, N.** A passive dynamic walking model indicates that gravity influences gait stability and bifurcations. *Presented at the Annual meeting of the Nebraska Academy of Sciences Aeronautics and Space Science Section*, Lincoln, Nebraska, April 2004.
- 109) Kurz, M.J., **Stergiou, N.** Insights on chaotic gait patterns form a simple passive dynamic walking model. *Presented at the 16<sup>th</sup> Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, April 2003.
- 110) **Stergiou, N.** Recent developments in the UNO HPER Biomechanics Laboratory. *Presented at the 16<sup>th</sup> Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, April 2003.
- 111) **Stergiou, N.** Exploring variability in human movement. *Presented at the University of Nevada Las Vegas*, Las Vegas, Nevada, November 2003.

- 112) **Stergiou, N.** Using principles from Biology, Mathematics, and Engineering to understand the complexity of human movement, Presented at the *HPER Luncheon*, Omaha, Nebraska, February 2003.
- 113) Kurz, M.J., **Stergiou, N.** The Aging Neuromuscular System Expresses Uncertainty for Selecting Joint Kinematics During Gait. Presented at the *North American Society of the Psychology of Sport and Physical Activity 2003 Conference*, Savannah, Georgia, June 2003.
- 114) Georgoulis, A.D., Ristanis, S., Giakas, G., Moraiti, T., Papageorgiou, C., **Stergiou, N.** Knee tibial internal-external rotation after ACL reconstruction. Presented at the *8<sup>th</sup> Annual Meeting of the Gait Clinical Movement Analysis Society*, Wilmington, Delaware, May 2003.
- 115) Keenan, S.M., **Stergiou, N.** The effect of speed on performer variability and deterministic origin during locomotion. Presented at the *15<sup>th</sup> Annual Nebraska Biomedical Engineering Research Workshop*, April 2002.
- 116) Kurz, M.J., **Stergiou, N.** Application of Dynamic Systems Theory for the analysis of gait. Presented at the *15<sup>th</sup> Annual Nebraska Biomedical Engineering Research Workshop*, April 2002.
- 117) Georgoulis, A.D., Moraiti, T., Giakas, G., **Stergiou, N.**, Papageorgiou, C.D. Periodicity of ACL Deficient Patients during Walking: An Application of the Chaos Theory. Presented at the *International Symposium of Ligaments and Tendons III*, New Orleans, Louisiana, February 2003.
- 118) Papageorgiou C.D., Ristanis, S., Giakas, G., **Stergiou, N.**, Georgoulis, A.D. Knee internal-external rotation after ACL reconstruction. Presented at the *International Symposium of Ligaments and Tendons III*, New Orleans, Louisiana, February 2003.
- 119) **Stergiou, N.**, Buzzi, U.H., Keenan, S.M. Using nonlinear tools to answer questions in motor control. Presented at the *Annual Motor Development Research Consortium*, Ann Arbor, Michigan, October 2001.
- 120) Buzzi, U.H., **Stergiou, N.** An investigation of the dynamics of Parkinsonian gait. Presented at the *Annual Motor Development Research Consortium*, Ann Arbor, Michigan, October 2001.
- 121) Harbourne, R., **Stergiou, N.**, Buzzi, U.H., Keenan, S.M. The use of complexity measures in the development of sitting in infants with movement dysfunction. Presented at the *Annual Motor Development Research Consortium*, Ann Arbor, Michigan, October 2001.
- 122) Morley, J.B., **Stergiou, N.**, Dierks, T., Blanke, D., French, J.A. An examination of ground reaction forces in runners with various degrees of pronation. Presented at the *25<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, San Diego, California, August 2001.
- 123) Hreljac, A., **Stergiou, N.**, Scholten, S.D. Lower extremity joint power when running over obstacles. Presented at the *25<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, San Diego, California, August 2001.
- 124) Dierks, T.A., **Stergiou, N.** Three-dimensional analysis of subtalar and knee joint coupling during running over obstacles. Presented at the *14<sup>th</sup> Nebraska Workshop on Biomedical Engineering Research*, Omaha, Nebraska, April 2001.
- 125) Buzzi, U.H., **Stergiou, N.** The effects of ACL Reconstruction on Locomotor Variability. Presented at the *14<sup>th</sup> Nebraska Workshop on Biomedical Engineering Research*, Omaha, Nebraska, April 2001.
- 126) Bates, B.T., Dufek, J.S., Mercer, J.A., **Stergiou, N.** The whys and hows of single subject analysis: a tutorial. Presented at the *24<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, Chicago, Illinois, August 2000.
- 127) Houser, J., **Stergiou, N.**, Scholten, S.D., Noble, J., Karst, G.M., Layne, C.S. Investigation of friction following obstacle clearance during walking. Presented at the *24<sup>th</sup> Annual Meeting of the American Society of Biomechanics*, Chicago, Illinois, August 2000.

- 128) Buzzi, U.H. **Stergiou, N.** The effects of anterior cruciate ligament reconstruction on lower extremity movement variability. Presented at the *Midwest Biomechanics Symposium*, Normal, Illinois, March 2000.
- 129) **Stergiou, N.** A chaotic analysis of gait parameters in different age groups. Presented at the *13<sup>th</sup> Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, March 2000.
- 130) **Stergiou, N.** Coordination between joints as an injury mechanism. Presented at the *12<sup>th</sup> Annual Nebraska Biomedical Engineering Research Workshop*, Lincoln, Nebraska, April 1999.
- 131) **Stergiou, N.** Analysis of human gait by chaotic dynamics. Presented at the *10<sup>th</sup> Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, April 1997.
- 132) **Stergiou, N.**, Bates, B.T. A Dynamical Systems Theory approach to running injuries. Presented at the *Annual Convention of the American Alliance for Health, Physical Education, Recreation and Dance*, St. Louis, Missouri, April 1997.
- 133) **Stergiou, N.**, Bates, B.T., Crussemeyer, J.A. The effects of stride length on subtalar and knee joint function. Presented at the *40<sup>th</sup> National Convention of the American College of Sports Medicine*, Indianapolis, Indiana, May 1994.
- 134) **Stergiou, N.**, James, R., Chen, F.C., Bates, B.T. An evaluation of exercise testing machines. Presented at the *Annual Northwest American College of Sports Medicine*, Eugene, Oregon, USA, February 1993.

#### **Poster Presentations (N = 341)**

- 1) Skiadopoulos A, Kent J, Wickstrom J, Sloan C, Stergiou N., The presence of a 1/f structure in our walking can enable us to withstand fall., Society for Neuroscience Annual Congress, San Diego, CA, USA. November 2018.
- 2) Rowen DA, Vaz JR, Knarr BA, Stergiou N. Walking with Visual Cueing Affects Cortical Hemodynamics. American Society of Biomechanics Annual Meeting, Rochester, MN, USA. August 2018.
- 3) Do people with a transtibial amputation have a rougher ride on uneven terrain? Kent JA, Takahashi KZ, Stergiou N., American Society of Biomechanics Annual Meeting, Rochester, MN, USA. August 2018.
- 4) Young K, Peck JL, Srivastara R, Pierce J, Stergiou N, Zuniga JM. Technical, Clinical and Functional Considerations for the Development of 3D Printed Upper-Limb Prostheses. American Society of Biomechanics Annual Meeting, Rochester, MN, USA. August 2018.
- 5) Sloan I, Kent JA, Wurdeman SR, Jacobsen AL, Takahashi KZ, Stergiou N. Subthreshold vibration does not affect walking performance of transtibial amputees., American Society of Biomechanics Annual Meeting, Rochester, MN, USA. August 2018.
- 6) Oludare SO, Stergiou N, Grabiner MD. Decreased divergence of the trunk movement trajectories during treadmill walking is not related to trunk flexion of young subjects following treadmill-delivered disturbances mimicking a trip. American Society of Biomechanics Annual Meeting, Rochester, MN, USA. August 2018.
- 7) Kent, JA, Takahashi KZ, Marmelat V, Stergiou N. Velocity-based control of postural sway in people with unilateral transtibial amputation. American Society of Biomechanics Annual Meeting, Boulder, CO, USA, August 2017.
- 8) Groff BR, Antonellis P, Knass B, Stergiou N. Movement variability and sensorimotor cortical activation during forward and backward walking. American Society of Biomechanics Annual meeting, Boulder, CO, USA, August 2017.

- 9) Mukherjee, M, Rand T.J., Fujan-Hansen J., Fayad, P, Stergiou, N. Learning a Gait Coordination Task after Stroke in Virtual Reality. 6th Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington, DC, USA, June 2016.
- 10) Kent JA, Takahashi KZ, Marmelat V, Stergiou N. Sub-threshold vibration for the enhancement of sensation and function in transtibial amputees: Preliminary results. Gait and Clinical Movement Analysis Society Meeting, Salt Lake City, UT, May 2016.
- 11) Yentes J, McCamley J, Wiens C, Denton W, Stergiou N, Rennard S. The association between walking and breathing coupling and energy expenditure in COPD patients. 6th Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington, DC, USA, June 2016.
- 12) Kyvelidou, A., Wickstrom, J., Senderling, B., & Stergiou, N. Gaze and motor behavior in infants at risk for autism. 6th Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington, DC, USA, June 2016.
- 13) Stergiou, N, Schieber, M, Hasenkamp, R, Johanning, JM, Pipinos, II, Myers, SA. Muscular strength characteristics at the ankle are altered by peripheral artery disease. 6th Biennial National IDeA Symposium of Biomedical Research Excellence (NISBRE), Washington, DC, USA, June 2016.
- 14) Schieber, M, Hasenkamp, RM, Stergiou, N, Johanning, JM, Pipinos, II, Myers, SA. Muscular strength and control characteristics at the ankle are altered by peripheral artery disease. Nebraska Physiological Society Annual Conference, Omaha, NE, USA, October 2016.
- 15) Rock CG, Wurdeman SR, Stergiou N, and Takahashi KZ. Relationship between push-off work and stride-to-stride fluctuations in transtibial prosthesis users. American Society of Biomechanics Annual Meeting, Raleigh, NC, USA, August 2016.
- 16) Boman R. Groff BR, Hough ML, Harrison SJ, Stergiou N. The Effect of Structured Auditory Stimulation on Human Movement Variability and Associated Cortical Involvement. American Society of Biomechanics Annual Meeting, Raleigh, NC, USA, August 2016.
- 17) Papachatzis N, Rock CG, Stergiou N, and Takahashi KZ. Push-off mechanics and stride-to-stride fluctuations during human walking. Rocky Mountain American Society of Biomechanics, Estes Park, CO, USA, April 2016.
- 18) Papachatzis N, Rock CG, Stergiou N, and Takahashi KZ. Push-off mechanics and stride-to-stride fluctuations during human walking. Dynamic Walking 2016, Camp Ohiyesa, MI, USA, June 2016.
- 19) Mattes K, Kent JA, Stergiou N, and Takahashi KZ. Comparison of Wii balance board and laboratory grade force plate for the measurement of sway during standing. Rocky Mountain American Society of Biomechanics, Estes Park, CO, USA, April 2016.
- 20) Meade Z, Kent JA, Stergiou N, Takahashi KZ. Validation of postural sway measurements using Wii balance board. Nebraska Research and Innovation Conference, Omaha, NE, USA, October 2016.
- 21) Papachatzis N, Rock CG, Stergiou N, Takahashi KZ. Stride-to-stride variability is influenced by push-off mechanics during human walking. Human Movement Variability Annual Conference, Omaha, NE, USA, June 2016.
- 22) Papachatzis N, Kent J, Vanderheyden T, Stergiou N, Takahashi KZ. Frequency validation of a high-bandwidth vibrotactile transducer for clinical use. Annual UNO Student Research and Creative Activity Fair, Omaha, NE, USA, March 2016.

- 23) Rock C, Wurdeman S, Stergiou N, Takahashi KZ. Push-off work and stride-to-stride fluctuations in below knee prosthesis users. Annual UNO Student Research and Creative Activity Fair, Omaha, NE, USA, March 2016.
- 24) Kent J, Papachatzis N, Vanderleyden T, Stergiou N, Takahashi KZ. Delivery of vibration to the residual limb via the prosthetic socket: preliminary investigation of signal integrity. Human Movement Variability Annual Conference, Omaha, NE, USA, June 2016.
- 25) Bischoff, B., Reynolds, N., Stergiou, N., Harrison, S.J. Gait affects both kinesthetic and visual perception of distance traversed. American Society of Biomechanics Annual Meeting, Columbus, OH, USA, August 2015.
- 26) Catlett, M., Raffalt, P.C., Eikema, D.J., Stergiou, N., Harrison, S.J. The effect of structured rhythmic auditory stimuli on the performance of a repetitive hammering task. American Society of Biomechanics Annual Meeting, Columbus, OH, USA, August 2015.
- 27) Hough, M.L., Harrison, S.J. Stergiou, N. Synchronization of gait with fractal musical stimuli occurs differently at short and long time scales. American Society of Biomechanics Annual Meeting, Columbus, OH, USA, August 2015.
- 28) Lueders, K., Eikema, D.J., Ambati, P., Stergiou, N., Bloomberg, J., Mukherjee, M. Reductions in structural and frequency coupling between posture and surface motion are facilitated by plantar tactile simulation. American Society of Biomechanics Annual Meeting, Columbus, OH, USA, August 2015.
- 29) Reynolds, N., Bischoff, B., Stergiou, N., Harrison, S.J. Information about how another person is moving through the environment is conveyed in the movements of their limbs. American Society of Biomechanics Annual Meeting, Columbus, OH, USA, August 2015.
- 30) Motz, Z., Ambati, P., Haworth, J., Grubaugh, J., Stergiou, N., Kyvelidou, A. The effect of static stimulus on the nonlinear dynamics of posture in children with ASD. American Society of Biomechanics Annual Meeting, Columbus, OH, USA, August 2015.
- 31) Surkar, S., Stergiou, N., Berger, S., Harbourne, R.T. Sitting postural control contributes to the development of focused attention in children with cerebral palsy. American Physical Therapy Association Combined Section Meeting, Indianapolis, IN, USA, February 2015.
- 32) Harrison, S.J., Hough, M.L., Stergiou, N. The effect of structured auditory stimulation on movement variability and associated cortical involvement. Society for Neuroscience Annual Meeting, Washington, DC, USA, November 2014.
- 33) Eikema, D.J.A., Chien, J.H., Stergiou, N., Scott-Pandorf, M., Peters, B., Bloomberg, J., Mukherjee, M. Locomotor adaptation to support surface perturbations is characterized by environmental decoupling. Society for Neuroscience Annual Meeting, Washington, DC, USA, November 2014.
- 34) Yentes, J.M., Rennard, S.I., Blanke, D., Stergiou, N. Patients with COPD walk with a more periodic step width pattern as compared to healthy controls. American Thoracic Society 2014 International Conference, San Diego, CA, USA, May 2014.
- 35) Yentes, J.M., Rennard, S.I., Blanke, D., Stergiou, N. The effect of exercise intervention on gait in patients with COPD: Findings from a pilot study. American Thoracic Society 2014 International Conference, San Diego, CA, USA, May 2014.
- 36) Yentes, J.M., Rennard, S.I., Blanke, D., Stergiou, N. Abnormal breathing strengthens locomotor respiratory coupling. 7th World Congress of Biomechanics Meeting, Boston, MA, USA, July 2014.

- 37) Yentes, J.M., Rennard, S.I., Blanke, D., Stergiou, N. Patients with COPD walk with a more periodic step width pattern as compared to healthy controls. 7th World Congress of Biomechanics Meeting, Boston, MA, USA, July 2014.
- 38) Wurdeman, S.R., Myers, S.A., Jacobsen, A.L., Stergiou, N. Adaptation and Prosthesis Effects on Stride-to-Stride Fluctuations. 7th World Congress of Biomechanics Meeting, Boston, MA, USA, July 2014.
- 39) Hough, M. L., Myers, S. A., Harrison, S. J., Wurdeman, S. R., McGrath, D., Stergiou, N. Improving elderly gait using a structured auditory stimulus. 7th World Congress of Biomechanics Meeting, Boston, MA, USA, July 2014.
- 40) Renz, J., Korgan, W., Myers, S.A., Stergiou, N., Wurdeman, S.R. Amputee Step Activity is Correlated to Stride-to-Stride Fluctuations at the Ankle. 7th World Congress of Biomechanics Meeting, Boston, MA, USA, July 2014.
- 41) Wurdeman, S.R., Jacobsen, A.L., Myers, S.A., Stergiou, N. Stride-to-stride fluctuations are related before and after adaptation for an appropriate prosthesis. American Academy of Orthotists & Prosthetists Annual Meeting, Chicago, IL, USA, February, 2014.
- 42) Wurdeman, S.R., Jacobsen, A.L., Myers, S.A., Stergiou, N. Adaptation and prosthesis effects on stride-to-stride fluctuations. American Academy of Orthotists & Prosthetists Annual Meeting, Chicago, IL, USA, February, 2014.
- 43) Wurdeman, S.R., Jacobsen, A.L., Myers, S.A., Stergiou, N. Activity measures fail to discriminate K2/K3 feet. American Academy of Orthotists & Prosthetists Annual Meeting, Chicago, IL, USA, February, 2014.
- 44) Wurdeman, S.R., Jacobsen, A.L., Stergiou, N. Changes in gait using the Rush foot: A preliminary study. American Academy of Orthotists & Prosthetists Annual Meeting, Chicago, IL, USA, February, 2014.
- 45) Eikema, D.J.A., Chien, J., Mukherjee, M., Stergiou, N. Optic flow affects the specificity of spatiotemporal characteristics of split-belt locomotor adaptation. North American Society for the Psychology of Sport and Physical Activity Conference, Minneapolis, MN, June, 2014.
- 46) Hatzitaki, V., Kyvelidou, A., Sofianidis, G., Stergiou, N. Postural sway and gaze can track the chaotic motion of a visual target. International Society for Posture and Gait Research World Congress, Vancouver, BC, Canada, June/July, 2014.
- 47) Hough, M., Harrison, M.J., Stergiou, N. Cerebral hemodynamics reflects temporal structure of auditory input and motor output variability. 2014 Nebraska Research and Innovation Conference (NRIC): Nebraska Neuroscience, Omaha, NE, USA, September, 2014.
- 48) Hough, M., Harrison, M.J., Stergiou, N. Cerebral hemodynamics reflects temporal structure of auditory input and motor output variability. fNIRS 2014, Montreal, QU, CA, October, 2014.
- 49) Mukherjee M, Chang WP, Siu KC, Fayad P, Stergiou N. Brain activity related to effects of augmented feedback on learning movements in a dynamic environment in healthy and stroke survivors. International Stroke Conference, Honolulu, HI, USA, February 2013.
- 50) Haworth J, Kyvelidou A, Fisher W, Stergiou N. Perception of complex movement in typically developing children and children with autism spectrum disorder. 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.
- 51) Haworth J, Kyvelidou A, Stergiou N. Can we see mathematical chaos in sensorimotor coordination? 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.

- 52) Kyvelidou A, Haworth J, Stergiou N. Variability of postural sway in children with autism spectrum disorders. 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.
- 53) Yentes JM, Hunt N, Schmid KK, Kaipust JP, McGrath D, Stergiou N. Sample entropy outperforms approximate entropy with small data sets. 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.
- 54) Cutler E, Wurdeman SR, Givens DL, Stergiou N. Assistive forces affect the temporal structure of gait variability. 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.
- 55) Korgan W, Wurdeman SR, Yentes JM, Rand T, Myers SA, Stergiou N. Reduced vertical displacement reverses effect of speed on energy expenditure. 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.
- 56) Cutler EL, Wurdeman SR, Myers SA, Givens DL, Stergiou N, Huisinga JM. Walking balance is improved in multiple sclerosis patients after elliptical exercise training. 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.
- 57) Renz J, Chien JH, Mukherjee M, Stergiou N. The temporal structure of postural control variability during standing is affected by suprathreshold mechanical stimulation. 37th Annual Meeting of the American Society of Biomechanics, Omaha, NE, USA, September 2013.
- 58) Yentes JM, Stergiou N. Understanding walking and breathing coupling when abnormal breathing patterns are present. Nebraska Academy of Sciences Annual Meeting, Lincoln, USA, April 2013.
- 59) Yentes JM, Rennard SI, Stergiou N. COPD affects variability in spatiotemporal gait patterns. Research Consortium Conference of the AAHPERD National Convention and Exposition, Charlotte, North Carolina, April 2013.
- 60) Haaland EJ, Kaipust JP, Wang Y, Stergiou N, Stoffregen TA. Getting ones' sea legs: The adaptive kinematics of human gait at sea. Annual North American Society for the Psychology of Sport and Physical Activity Meeting, New Orleans, USA, June 2013.
- 61) Arnold BA, Yu Y, Haworth JL, Vallabhajosula S, Harbourne RT, Stergiou N. Variability measures are sensitive to the severity of cerebral palsy for sitting postural control. XVIIIth Biennial International Conference on Infant Studies. Minneapolis, MN, USA, June 2012.
- 62) Chen SJ, Stergiou N. Lower limb sagittal and frontal joint moments altered by grasping a handrail during stair ascent. 2012 Northwest Biomechanics Symposium. Eugene, OR, USA, May 2012.
- 63) Chien JH, Huang CK, Vallabhajosula S, Mukherjee M, Siu KC, Stergiou N. The effect of vibrotactile stimulation on long range correlation of stride interval time series among different walking speeds. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 64) Chien JH, Mukherjee M, Stergiou N. Suprathreshold mechanical vestibular stimulation affects postural control during standing. Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA, October 2012.
- 65) Chien, JH, Huang CK, Mukherjee M, Myers SA, Siu, KC, Stergiou N. The effect of a random visual perturbation on gait variability. 2012 Gait and Clinical Movement Analysis Society Conference. Grand Rapids, MI, USA, May 2012.
- 66) Chien JH, Huang CK, Mukherjee M, Siu CK, Stergiou N. Sensory interaction under perturbations during locomotion in healthy individuals. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.



- 67) Cutler, E, Schmid, K, Stergiou, N, Johanning, JM, Pipinos, I., Myers, SA. Gait Mechanics Differ Between Healthy Controls And Patients With Peripheral Arterial Disease. 2012 Gait and Clinical Movement Analysis Society Conference. Grand Rapids, MI, USA, May 2012.
- 68) Cutler E, Wurdeman S, McGrath D, Myers S, Stergiou N, Huisinga J. Margin of Stability As a Metric for Balance Impairment in Multiple Sclerosis. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 69) Cutler E, Huban N, Korgan AC, Myers SA, Johanning JM, Pipinos II, Stergiou N. Differences in gait improvements following surgery in slow and fast PAD patients. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 70) Davidson AJ, Mukherjee M, Padala K, Stergiou N. The relationship between static standing balance control and the Sensory Organization Test in Alzheimer's patients. Annual North American Society for the Psychology of Sport and Physical Activity Meeting. Honolulu, HI, USA, June 2012.
- 71) Davidson AJ, Henning HL, Huben NB, Wurdeman SR, Stergiou N. External Work is Increased Using Rocker Bottom Shoes. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 72) Davidson AJ, Vallabhajosula S, Tan CW, Mukherjee M, Siu KC, Yentes JM, Myers SA, Stergiou N. Cognitive dual-tasking has greater impact than physical dual-tasking on lower joint kinetics during stair ascension. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 73) Harbourne R, Willett SL, Ryalls B, Stergiou N. The use of stochastic noise during intervention to improve sitting postural control in children with cerebral palsy. 2013 Combined Sections Meeting of the American Physical Therapy Association. San Diego, CA, USA, January 2013.
- 74) Hasenkamp RM, Yentes JM, Wurdeman SR, Huisinga JM, Stergiou N. Mechanical efficiency during gait is altered by multiple sclerosis. Annual University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 75) Haworth JL, Vallabhajosula S, Stergiou N. Perception of motion complexity is deficient in adults with Autism Spectrum Disorder. International Meeting for Autism Research. Toronto, Ontario, Canada, May 2012.
- 76) Haworth JL, Harbourne RT, Fisher W, Stergiou N. Gaze and posture differentially entrain to the motion structure of a point-light visual stimulus. XVIIIth Biennial International Conference on Infant Studies. Minneapolis, MN, USA, June 2012.
- 77) Haworth JL, Kokkoni E, Harbourne R, Stergiou N. Evaluating concurrent development of cognitive and motor behavior in typical and delayed infants. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 78) Huang CK, Chien JH, Mukherjee M, Siu KC. Reduced light intensity alters spatiotemporal gait patterns during treadmill walking 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 79) Huben, N, Eikema DJ, Stergiou N, Hatzitaki V. Approximate entropy indicates that visual surround oscillation alters sway patterns regulatory in elderly individuals. ISPGR/Gait & Mental Function 1<sup>st</sup> Joint World Congress. Trondheim, Norway, June 2012.
- 80) Hunt NH, Stergiou N. Manipulation of the structure of gait variability with rhythmic auditory stimulus. 2013 Society for Integrative and Comparative Biology Annual Meeting. San Francisco, CA, USA, January 2013.

- 81) Hunt N, Cignetti F, Stergiou N. Evidence of different control processes in the maintenance of standing and sitting posture. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 82) Hunt NH, Stergiou N. Manipulation of the structure of gait variability with rhythmic auditory stimulus. 2013 Society for Integrative and Comparative Biology Annual Meeting. San Francisco, CA, USA, January 2013.
- 83) Korgan W, Wurdeman SR, Yentes JM, Myers SA, Stergiou N. Kinematics confirm reduced displacement of the body's center of mass can increase energy expenditure. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 84) Korgan W, Wurdeman SR, Stergiou N. Effects of altered potential energy during gait: Implications of center of mass displacement in space flight. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 85) Korgan W, Wurdeman S, Stergiou N. Effects of altered potential energy during gait: Implications of center of mass displacement in space flight. Annual University of Nebraska at Omaha Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 86) McGrath D, Wurdeman SR, Yentes JM, Hunt N, Myers SA, Stergiou N. Metabolic cost of maintaining balance during a perturbed gait task is related to gait variability. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 87) McGrath D, Stergiou N. The effects of auditory stimulation on gait variability in healthy elderly. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 88) Mukherjee M, Chien JH, Vallabhajosula S, Stergiou N. Locomotor Adaptation in a virtual environment affects gait kinetics. Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA, October 2012.
- 89) Rand, T., Yentes, J.M., Stergiou, N., Myers, S.A. Fear of falling is related to walking impairment in peripheral arterial disease. 17th Annual Gait and Clinical Movement Analysis Society Meeting. Grand Rapids, MI, USA, May 2012.
- 90) Renz JJ, Vallabhajosula S, Hunt N, Chien JH, Stergiou N. Differences in stride interval variability during stair-climbing and treadmill walking. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 91) Renz JJ, Stergiou N. Adaptations in joint kinetics over consecutive steps in stair negotiation. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012. (50%)
- 92) Vallabhajosula S, Renz JJ, Chien JH, Hunt N, Stergiou N. Influence of stepping rate on stride interval variability of stair-climbing. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 93) Vallabhajosula S, Tan CW, Davidson AJ, Mukherjee M, Siu KC, Yentes JM, McGrath D, Myers SA. Kinematics and kinetics of stair ascent while dual-tasking. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 94) Vallabhajosula S, Yentes J, Tan CW, Siu KC, Stergiou N. Impact of starting position on variability of neuromuscular control during stair negotiation. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 95) Willett SL, Harbourne R, Beyersdorf A, Ryalls B, Stergiou N. Intervention for postural control in sitting and interaction with play in children with severe or moderate cerebral palsy. 2013 Combined Sections Meeting of the American Physical Therapy Association. San Diego, CA, USA, January 2013.

- 96) Wurdeman SR, Yentes JM, Myers SA, Jacobsen AL, Stergiou N. Both limbs in unilateral transtibial amputees display increased risk for tripping. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 97) Wurdeman SR, Myers SA, Stergiou N. Transtibial amputee joint motion has larger Lyapunov exponents. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 98) Wurdeman SR, Myers SA, Jacobsen AL, Stergiou N. Amputee prosthesis preference is related to the nonlinear dynamics. 2012 Gait and Clinical Movement Analysis Society Conference. Grand Rapids, MI, USA, May 2012.
- 99) Wurdeman SR, Myers SA, Stergiou N, Pipinos II, Johanning JM. External work is deficient in both limbs of patients with unilateral PAD. 7<sup>th</sup> Annual Academic Surgical Congress. Las Vegas, NV, USA. February 2012.
- 100) Wurdeman SR, Myers SA, Huben N, Stergiou N. Direction of gait affects attractor divergence. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 101) Wurdeman SR, Myers SA, Stergiou N. Design of ankle exoskeleton for calf muscle weakness. Nebraska Academy of Sciences Annual Meeting. Lincoln, Nebraska, USA, April 2012.
- 102) Yentes, J.M., Rennard, S.I., Stergiou, N. Walking abnormalities in patients with COPD. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 103) Yentes JM, Stergiou N. Gait in patients with COPD is mainly affected in proximal musculature. 4<sup>th</sup> Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 104) Yu Y, Haworth JL, Vallabhajosula S, Harbourne RT, Stergiou N. Children with cerebral palsy may not benefit from stochastic vibration when developing independent sitting. 36<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 105) Yu Y, Haworth JL, Vallabhajosula S, Harbourne RT, Stergiou N. Move more, learn faster: Contribution of sway variability to achieving the sitting milestone in infants with cerebral palsy. XVIIIth Biennial International Conference on Infant Studies. Minneapolis, MN, USA, June 2012.
- 106) Arnold B, Decker LM, Potter J, Stergiou N. Cognitive challenge causes a differential control of joint kinematics with aging. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 107) Carey J, Huisinga J, Stergiou N. Resistance training alters joint powers in multiple sclerosis patients. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 108) Chien JH, Huang C-K, Huben NB, Siu KC, Stergiou N. Sensory interaction under perturbations during locomotion in healthy individuals. Proceedings of the 41<sup>st</sup> Annual Meeting of the Society for Neuroscience. Washington DC, November 2011.
- 109) Chien, J.H., Vallabhajosula, S., Siu, K.C., Stergiou, N. The effect of walking speed on gait variability in middle-age and elderly individuals. Proceedings of the 16<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting, Bethesda, Maryland, May 2011.
- 110) Chien, J.H., Vallabhajosula, S., Siu, K.C., Stergiou, N. The effect of walking speed on gait variability in middle-age and elderly individuals. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 111) Hasenkamp, R., Wurdeman, S., Stergiou, N. Variability of movement in an altered inertial dynamics task. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.

- 112) Haworth, J.L., Kokkoni, E., Harbourne, R.T, Stergiou, N. Evaluating concurrent development of cognitive and motor behavior in typical and delayed infants. Proceedings of the 41<sup>st</sup> Annual Meeting of the Society for Neuroscience. Washington DC, November 2011.
- 113) Haworth, J.L., Cignetti, F., Kokkoni, E., Harbourne, R.T., Stergiou, N. Beneficial effect of perceptual-motor intervention with surface vibrations on postural function of infants with cerebral palsy. Proceedings of the North American Society for the Psychology of Sport and Physical Activity, Burlington, Vermont, June 2011.
- 114) Haworth, J.L., Kokkoni, E., Harbourne, R.T, Stergiou, N. Surrogation analysis reveals development of deterministic structure in the control of posture. Proceedings of the 35th annual meeting of the American Society of Biomechanics, Long Beach, California, August 2011.
- 115) Heather, H., Stergiou, N. Gait affects clustering and switching on semantic fluency. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 116) Henning, H.L., Wurdeman, S.R., Huben, N.B., Stergiou, N. External work is increased using rocker bottom shoes. Proceedings of the 2011 American Society of Biomechanics Annual Meeting. Long Beach, California, August 2011.
- 117) Huben, N.B., Kaipust, J.P., Stergiou, N. The effects of auditory stimulation on gait variability in healthy elderly. Proceedings of the 16<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting. Bethesda, Maryland. 2011.
- 118) Huben, N.B., Korgan, A.C., Myers, S.A., Johanning, J.M., Pipinos, I.I., Stergiou, N. Differences in gait improvements following surgery in slow and fast PAD patients. Proceedings of the 16<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting. Bethesda, Maryland. 2011.
- 119) Hunt, N., Decker, L., Stergiou, N. Phonological dual-task interference affects walking regularity. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 120) Kokkoni, E., Cignetti, F., Haworth, J.L., Harbourne, R.T., Stergiou, N. Eight-month-old infants are able to disregard altered somatosensory information to maintain a stable sitting posture: follow up on the preliminary evidence. Proceedings of the North American Society for the Psychology of Sport and Physical Activity, Burlington, Vermont, June 2011.
- 121) Kokkoni, E., Haworth, J.L, Stergiou, N. Discriminant function analysis to predict the time course of sitting development in infants. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 122) Kokkoni, E., Haworth, J.L, Stergiou, N. Are there gender differences in the development of sitting posture? Proceedings of the 41<sup>st</sup> Annual Meeting of the Society for Neuroscience. Washington DC, November 2011.
- 123) Korgan, W., Stergiou, N. Linear and non-linear analysis of ambulatory activity patterns in Alzheimer's disease: Preliminary results. Proceedings of the 3<sup>rd</sup> Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 124) Mukherjee, M., Siu, K.C., Fayad, P., Stergiou, N. The effect of a virtual environment on locomotor adaptation. Proceedings of the 41<sup>st</sup> Annual Meeting of the Society for Neuroscience. Washington DC, November 2011.
- 125) Mukherjee, M., Koutakis, P., Fayad, P., Stergiou, N. Augmented visual feedback affects endpoint stiffness control in chronic stroke survivors during learning of reaching movements in a dynamic environment. Proceedings of the International Stroke Conference, Los Angeles, CA, February 2011.

- 126) Mukherjee, M., Koutakis, P., Fayad, P., Stergiou, N. Augmented visual feedback affects endpoint stiffness control in chronic stroke survivors during learning of reaching movements in a dynamic environment. Proceedings of the 3<sup>rd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, April 2011.
- 127) Myers, S.A., Johanning, J.M., Pipinos, I.I., Stergiou N. Difference in gait variability caused by peripheral arterial disease persist after accounting for the effect of reduced blood flow. Proceedings of the 41<sup>st</sup> Annual Meeting of the Society for Neuroscience. Washington DC, November 2011.
- 128) Padala, K., Mukherjee, M., Padala, P.K., Burke, W.J., Stergiou, N. Ambulatory activity patterns in Alzheimer's disease based on the living situation: Preliminary Results. Proceedings of the Annual Meeting of the Alzheimer's Association: ICAD, Paris, July 2011.
- 129) Padala, K., Mukherjee, M., Padala, P.K., Burke, W.J., Stergiou, N. Ambulatory activity patterns in Alzheimer's disease: Preliminary results in samples of community-dwelling and assisted living subjects. Proceedings of the Annual Meeting of the American Geriatrics Society, Washington DC, May 2011.
- 130) Tan, C.W., Cignetti, F., Haworth, J., Harbourne, R., Corr, B., Stergiou, N. Reliability of the Balance-O-Gram as a device for sitting posture evaluation in infants. Proceedings of the North American Society for the Psychology of Sport and Physical Activity, Burlington, Vermont, June 2011.
- 131) Vallabhajosula, S., Yentes, J.M., Tan, C.W., Siu, K.-C., Stergiou, N. Impact of starting position on variability of neuromuscular control during stair negotiation. Proceedings of the 41<sup>st</sup> Annual Meeting of the Society for Neuroscience. Washington DC, November 2011.
- 132) Vallabhajosula, S., Yentes, J.M., Tan, C.W., Siu, K.-C., Stergiou, N. Frontal joint dynamics when initiating stair ascent with and without gait speed. Proceedings of the 35<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Long Beach, California, August 2011.
- 133) Vallabhajosula, S., Yentes, J.M., Tan, C.W., Siu, K.-C., Stergiou, N. Do lower-extremity joint dynamics change when stair negotiation is initiated with a self-selected gait speed? Proceedings of the 16<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting. Bethesda, Maryland, April 2011.
- 134) Wurdeman, S.R., Myers, S.A., Huben, N.B., Stergiou, N. Direction of gait affects attractor divergence. Proceedings of the 21<sup>st</sup> Annual International Society for Chaos Theory in Psychology & Life Sciences Conference. Orange, California, August 2011.
- 135) Yentes, J. M., Vallabhajosula, S., Stergiou, N. Adaptations in joint kinetics over consecutive steps in stair negotiation. Proceedings of the 35<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Long Beach, California, August 2011.
- 136) Yentes, J.M., Wurdeman, S.R., Huisinga, J.M., Stergiou, N. Mechanical efficiency during gait is altered by multiple sclerosis. Proceedings of the Gait & Clinical Movement Analysis Society 2011 Annual Scientific Meeting. Bethesda, Maryland, April 2011.
- 137) Yentes, J.M., Rennard, S.I., Stergiou, N. Gait in patients with COPD is mainly affected in proximal musculature. Proceedings of the American Society of Biomechanics 2011 Meeting. Long Beach, California, August 2011.
- 138) Yentes, J.M., Stergiou, N. Gait abnormalities in Chronic Obstructive Pulmonary Disease. Proceedings of the 2011 Nebraska Academy of Sciences Annual Meeting. Lincoln, Nebraska, April 2011.
- 139) Chien, J.H., Stergiou, N., Siu, K.C. Age-related changes in balance control from the age of 20 to 60: A preliminary study. Proceedings of the 138th American Public Health Association

- Annual Meeting, Denver, Colorado, November 2010.
- 140) Chien, J.H., Decker, L.M., Bonasera, S.J., Stergiou, N. Variability in daily ambulatory activity patterns in aged mice. Proceedings of the Society for Neuroscience's 40<sup>th</sup> annual meeting. San Diego, California, November 2010. AAA20/687.8
  - 141) Cignetti, F., Kyvelidou, A., Harbourne, R., Stergiou, N. Development of sitting postural control: Relationships between coordination and centre of pressure measures. Proceedings of the International Conference of Infant Studies, Baltimore, Maryland, March 2010. 3-013(27)
  - 142) Cignetti, F., Stergiou, N. Evidence of different control processes in the maintenance of standing and sitting posture. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB8/687.18
  - 143) Cignetti, F., Kyvelidou, A., Harbourne, R., Stergiou, N. Development of sitting postural control: Relationships between coordination and centre of pressure measures. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
  - 144) Decker, L.M., Potter, J.F., Stergiou, N. Cognitive challenge causes a differential control of joint kinematics with aging. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB5/687.15
  - 145) Decker, L.M., Myers, S.A., Stergiou, N. Performance of dual-tasks requiring language perception, attention, and executive control processes have differential effects on stride width in young adults. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
  - 146) Fosnaugh, E., Stergiou, N., Decker, L.M., Myers, S.A. Dual tasking indicates elderly inability to delegate locomotion to lower levels of control. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
  - 147) Harbourne, R.T., Bauer, J., Kyvelidou, A., Stergiou, N. Infant looking times and developing sitting postural control. Proceedings of the International Conference of Infant Studies, Baltimore, Maryland, March 2010.
  - 148) Haworth, J., Kyvelidou, A., Harbourne, R., Stergiou, N. Stochastic vibration as a therapeutic modality to improve the development of sitting posture in children with cerebral palsy. Proceedings of the 2010 International Conference on Infant Studies, Baltimore, Maryland, March 2010. 1-010(28)
  - 149) Haworth, J., Harbourne, R., Kyvelidou, A., Cignetti, F., Stergiou, N. Development of sitting posture in children with Cerebral Palsy during intervention with and without stochastic noise. Presented at North American Society for the Psychology of Sport and Physical Activity Annual Conference, Tucson, Arizona, June 2010.
  - 150) Haworth, J., Kyvelidou, A., Harbourne, R., Stergiou, N. Patterns of object attention throughout the time course of sitting development: A case study. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB3/687.13
  - 151) Haworth, J., Harbourne, R., Kyvelidou, A., Cignetti, F., Stergiou, N. (presented by Kokkoni, E.) Development of sitting posture in children with Cerebral Palsy during intervention with and without stochastic noise. Presented at UNMC College of Public Health Research Consortium. Omaha, Nebraska, October 2010.
  - 152) Huang, C.K., Mukherjee, M., Chien, J.H., Stergiou, N., Siu, K.C. Walking in a moving corridor with variable width size affects step width control. Proceedings of the UNMC CoPH Open House Conference. Omaha, Nebraska, November 2010.

- 153) Huben, N.B., Yentes, J.M., Koutakis, P., Myers, S.A., Johanning, J.M., Pipinos, I.I., Stergiou, N. Gait impairment in PAD patients is independent of level of disease. Proceedings of the 7<sup>th</sup> Annual UNMC SURP Research Colloquium. Omaha, Nebraska, 2010.
- 154) Huben, N.B., Myers, S.A., Stergiou, N., Pipinos, I.I., Johanning, J.M. Basic biomechanical parameters in patients with peripheral arterial disease: A critical review of the literature. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
- 155) Huben, N.B., Yentes, J.M., Koutakis, P., Myers, S.A., Johanning, J.M., Pipinos, I.I., Stergiou, N. Gait impairment in PAD patients is independent of level of disease. Proceedings of the 15<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting. Miami, Florida, May 2010.
- 156) Huisinga, J.M., Filipi, M.L., Stergiou, N. Linear and nonlinear assessment of postural control in multiple sclerosis patients. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
- 157) Huisinga, J.M., Wurdeman, S.R., Kaipust, J.P., Filipi, M.L., Stergiou, N. Variability of step width is associated with improvement in cognitive function following resistance training in Multiple Sclerosis patients. Proceedings of the Society for Neuroscience's 40<sup>th</sup> annual meeting. San Diego, California, November 2010. BBB1/687.11
- 158) Hunt, N., Decker, L.M., Potter, J.F., Stergiou, N. Phonological dual-task interference affects walking regularity. Proceedings of the 40<sup>th</sup> Annual Meeting of the Society for Neuroscience, San Diego, California, October 2010. BBB6/687.16
- 159) Kaipust, J.P., Huisinga, J.M., Filipi, M.L., Kyvelidou, A., Stergiou, N. Gait variability differences in MS patients are not affected by resistance training. Proceedings of the 15<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting. Miami, Florida, March 2010.
- 160) Kaipust, J.P., Huisinga, J.M., Filipi, M.L., Stergiou, N. Gait Variability Measures Reveal Differences between Multiple Sclerosis Patients and Healthy Controls. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
- 161) Kokkoni, E., Haworth, J., Stergiou, N. Discriminant function analysis to predict the time course of sitting development in infants. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB9/687.19
- 162) Kokkoni, E., Kyvelidou, A., Harbourne, R.T., Stergiou, N. Correlation dimension can describe infant sitting postural development. Proceedings of the International Conference of Infant Studies, Baltimore, Maryland, March 2010. 2-004(8)
- 163) Kokkoni, E., Dempsey, J., Harbourne, R.T., Kelly-Vance, L., Ryalls, B., Stergiou, N. Developing sitting postural control and play in children with Cerebral Palsy. Proceedings of the North American Society for the Psychology of Sport and Physical Activity, Tucson, Arizona, June 2010.
- 164) Kokkoni, E., Kyvelidou, A., Harbourne, R.T., Stergiou, N. Correlation Dimension can describe infant sitting postural development. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
- 165) Koutakis, P., Mukherjee, M., Strasser, R., Stergiou, N. Path integration of human walking on a circular path: The effect of the vestibular system. Proceedings of the The Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB7/687.17
- 166) Koutakis, P., Myers, S.A., Pipinos, I.I., Johanning, J.M., Stergiou, N. Joint powers are affected by age and peripheral arterial disease. Proceedings of the 34<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Providence, Rhode Island, August 2010.

- 167) Kyvelidou, A., Harbourne, R.T., Kokkoni, E., Stergiou, N. Development of upper body coordination during sitting in infants with or at risk for Cerebral Palsy. Proceedings of the International Conference of Infant Studies, Baltimore, Maryland, March 2010. 1-010(29)
- 168) Momcilovic, M., Myers, S.A., Stergiou, N. Performance of dichotic listening task under various attentional instructions have different effects on functional gait asymmetry in young adults. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
- 169) Mukherjee, M., Koutakis, P., Siu, K.C., Fayad, P., Stergiou, N. Movement variability during motor learning of reaching in novel dynamic environments in chronic stroke survivors. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. AAA21/687.9
- 170) Myers, S.A., Johanning, J.M., Pipinos, I.I., Stergiou, N. Vascular occlusion affects gait variability patterns of healthy younger and older individuals. Proceedings of the 34th Annual Meeting of the American Society of Biomechanics. Providence, Rhode Island, August 2010.
- 171) Myers, S.A., Decker, L., Stergiou, N. The associations between cognitive and physical function during dual task paradigms. Proceedings of the 130th Annual Meeting of the Nebraska Academy of Sciences. Lincoln, Nebraska, April 2010.
- 172) Myers, S.A., Decker, L.M., Rodríguez-Aranda, C.E., Potter, J.F., Stergiou, N. Gait variability can predict cognitive performance on the semantic fluency test. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
- 173) Padala, K., Koutakis, P., Mukherjee, M., Padala, P.K., Burke, W.J., Stergiou, N. Linear and Non-linear Analysis of Ambulatory Activity Patterns in Alzheimer's disease: Preliminary Results. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB10/687.20
- 174) Park, S.-H., Momcilovic, M., Stergiou, N. Postural control of transition from over ground walking to stair ascent. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB2/687.12
- 175) Park, S.-H., Momcilovic, M., Stergiou, N. (presented by Vallabhajosula, S.) Postural control of transition from over ground walking to stair ascent. Midlands Chapter of the Society for Neuroscience. Omaha, Nebraska, December 2010.
- 176) Siu, K.C., Chien, J.H., Mukherjee, M., Katsavelis, D., Stergiou, N. Walking in a moving virtual corridor with variable width affects step width variability. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. BBB4/687.14
- 177) Siu, K.C., Mukherjee, M., Katsavelis, D., Chien, J.H., Stergiou, N. Walking in a moving virtual corridor with variable width size affects step width control. Proceedings of the 15th Annual Gait and Clinical Movement Analysis Society Conference. Miami, Florida, May 2010.
- 178) Siu, K.C., Chien, J.H., Mukherjee, M., Katsavelis, D., Stergiou, N. Walking in a moving virtual corridor with variable width affects step width variability. Midlands Chapter of the Society for Neuroscience. Omaha, Nebraska, December 2010.
- 179) Tan, C.W., Kokkoni, E., Kyvelidou, A., Harbourne, R.T., Stergiou, N. Correlation Dimension can describe infant sitting postural development. Presented at UNMC College of Public Health Research Consortium. Omaha, Nebraska, October 2010.
- 180) Teten, A.F., Decker, L.M., LeBaron, R.M., Potter, J.F., Stergiou, N. Gait affects clustering during phonemic fluency. Proceedings of the Society for Neuroscience's 40<sup>th</sup> Annual Meeting. San Diego, California, November 2010. AAA19/687.7



- 181) Teten, A.F., Decker, L.M., Potter, J.F., Stergiou, N. Top-down processing: Effects of age and dual-task conditions. Proceedings of the Annual American Speech-Language-Hearing Association Convention. Philadelphia, Pennsylvania, November 2010.
- 182) Wurdeman, S.R., Huisinga, J.M., Filipi, M., Stergiou, N. Frequency analysis of ground reaction forces shows differences in gait in Multiple Sclerosis patients. Proceedings of the 15th Annual Gait and Clinical Movement Analysis Society Conference. Miami, Florida, May 2010.
- 183) Wurdeman, S.R., Huisinga, J.M., Filipi, M., Stergiou, N. Frequency analysis of ground reaction forces shows differences in gait in Multiple Sclerosis patients. Presented at UNMC College of Public Health Research Consortium 2010, Omaha, Nebraska, October 2010. (Best Poster Award)
- 184) Wurdeman, S.R., Huisinga, J.M., Filipi, M., Stergiou, N. Frequency analysis of ground reaction forces shows differences in gait in Multiple Sclerosis patients. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010.
- 185) Yentes, J.M., Decker, L.M., Fosnaugh, E.M., Teten, A.W., Potter, J.F., Stergiou, N. Gait affects clustering and switching on semantic fluency. Proceedings of the Society for Neuroscience's 40<sup>th</sup> annual meeting. San Diego, California, November 2010. AAA22/687.10
- 186) Yentes, J.M., Decker, L.M., Fosnaugh, E.M., Teten, A.W., Potter, J.F., Stergiou, N. Gait affects clustering and switching on semantic fluency. Midlands Chapter of the Society for Neuroscience. Omaha, Nebraska, December 2010.
- 187) Yentes, J.M., Huisinga, J.M., Myers, S.A., Pipinos, I.I., Johanning, J.M., Stergiou, N. Pharmacological treatment for intermittent claudication does not significantly affect gait impairments during claudication pain. Proceedings of the 15th Annual Gait and Clinical Movement Analysis Society Conference. Miami, Florida, May 2010.
- 188) Yentes, J.M., Decker, L.M., Myers, S.A., Rodríguez-Aranda, C.E., Potter, J.F., Stergiou, N. Aging and dual task alter amount and structure of lower limb kinematic variability during gait. Proceedings of the 2<sup>nd</sup> Annual UNO Student Research and Creative Activity Fair. Omaha, Nebraska, March 2010
- 189) Padala, K., Padala, P., Stergiou, N., Bissell, M., Davis, S., Malloy, T., Potter, J., Burke, W. Wii-fit for balance and gait in skilled nursing facility: A retrospective study. The Gerontological Society of America 62<sup>nd</sup> Annual Meeting, Atlanta, Georgia, November 2009.
- 190) Teten, A.F., Decker, L.M., Smith, H.N., Stergiou, N. Dual-task effects on language and processing speed: An aging study. American Speech-Language-Hearing Association, New Orleans, Louisiana, November 2009.
- 191) Momcilovic, M.M., Decker, L.M., Myers, S.A., Rodríguez-Aranda, C.E., Potter, J.F., Stergiou, N. Performance of the dichotic listening task under various attentional instructions have differential effects on gait asymmetry in young adults. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.
- 192) Decker, L.M., Myers, S.A., Rodríguez-Aranda, C.E., Potter, J.F., Stergiou, N. Performance of dual-tasks requiring language perception, attention, and executive control processes have differential effects on stride width in young adults. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.
- 193) Stergiou, N., Kyvelidou, A., Harbourne, R.T. Infant sitting posture under distorted visual and proprioceptive information. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.

- 194) Huisinga, J., Filipi, M., Stergiou, N. Linear and nonlinear assessment of postural control in Multiple Sclerosis patients. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.
- 195) Kaipust, J., Huisinga, J., Filipi, M., Stergiou, N. Gait variability measures reveal differences between Multiple Sclerosis patients and healthy controls. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.
- 196) Myers, S.A., Decker, L.M., Rodríguez-Aranda, C.E., Potter, J.F., Stergiou, N. Gait variability can predict cognitive performance on the semantic fluency test. Proceedings of Neuroscience 2009, Chicago, Illinois, October 2009.
- 197) Yentes, J., Decker, L.M., Myers, S.A., Rodríguez-Aranda, C.E., Potter, J.F., Stergiou, N. Aging and dual task alter amount and structure of lower limb kinematic variability during gait. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.
- 198) Kiu, K., Suh, I.H., Mukherjee, M., Oleynikov, D., Stergiou, N. The effect of cognitive distraction on skill performance in robotic surgery. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.
- 199) Koutakis, P., Blanke, D., Stergiou, N. Path integration of human walking on curvature tasks. Proceedings of The Society for Neuroscience's 39<sup>th</sup> Annual Meeting, Chicago, Illinois, October 2009.
- 200) Huben, N., Myers, S.A., Stergiou, N., Pipinos, I., Johanning, J.M. Basic biomechanical parameters in patients with Peripheral Arterial Disease: A critical review of the literature. Nebraska Physiological Society 12<sup>th</sup> Annual Meeting, Omaha, Nebraska, October 2009.
- 201) Huben, N., Koutakis, P., Johanning, J.M., Myers, S.A., Stergiou, N. Abnormal joint powers before and after the onset of claudication symptoms. Nebraska Research and Innovation Conference, Omaha, Nebraska, September 2009.
- 202) Smith, B.A., Stergiou, N., Ulrich, B. Nonlinear and linear measures of gait variability and stability across the lifespan in persons with Down Syndrome. Proceedings of Progress in Motor Control 7, Marseille, France, July 2009.
- 203) Decker, L.M., Myers, S.A., Rodríguez-Aranda, C.E., Potter, J.F., Stergiou, N. Task difficulty affects gait variability during dual task in healthy young and older adults. Proceedings of 19<sup>th</sup> IAGG World Congress of Gerontology and Geriatrics, Paris, France, July 2009.
- 204) Patras, K., Ziogas, G., Ristanis, S., Tsepis, E., Stergiou, N., Georgoulis, A.D. Asymmetries in muscle recruitment patterns in ACLR and healthy soccer players during high intensity running. Proceedings of 14<sup>th</sup> Annual Congress of the European College of Sports Sciences, Oslo, Norway, July 2009.
- 205) Filipi, M.L., Leuschen, M.P., Stergiou, N., Huisinga, J.M., Agawral, S., Schmaderer, L., Vogel, J., Kucera, D. Impact of resistance training on balance in Multiple Sclerosis. Proceedings of the 23<sup>rd</sup> Annual Consortium of Multiple Sclerosis Centers Meeting, Atlanta, Georgia, May 2009.
- 206) Huisinga, J.M., Filipi, M., Stergiou, N. Resistance training alters joint moments and powers in Multiple Sclerosis patients independent of disease severity. Proceedings of the 14<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting, Denver, Colorado, March 2009.
- 207) Yentes J.M., Koutakis, P., Myers, S.A., Kaipust, M.P., Pipinos, I.I., Johanning, J.M., Stergiou, N. Unilateral intermittent claudication affects joint kinematics during gait. Proceedings of the 14<sup>th</sup> Annual Gait and Clinical Movement Analysis Society Meeting, Denver, Colorado, March 2009.

- 208) Katsavelis, D., Mukherjee, M., Decker, L., Stergiou, N. Lower extremity joint kinematic variability as produced by virtual reality during backward walking. Proceedings of the 14th Annual Gait and Clinical Movement Analysis Society Meeting, Denver, Colorado, March 2009.
- 209) Huisinga, J., Stergiou, N. Resistance training alters joint powers in Multiple Sclerosis patients. Proceedings of the University of Nebraska Centennial Celebration of Student Research and Creative Activity, Omaha, Nebraska, March 2009.
- 210) Kaipust, J.P., Yentes, J.M., Koutakis, P., Myers, S.A., Stergiou, N. Unilateral intermittent claudication affects joint kinematics during gait. Proceedings of the University of Nebraska Centennial Celebration of Student Research and Creative Activity, Omaha, Nebraska, March 2009.
- 211) Kyvelidou, A., Stergiou, N. Reliability of COP measurements during sitting in developmentally delayed infants. Proceedings of the University of Nebraska Centennial Celebration of Student Research and Creative Activity, Omaha, Nebraska, March 2009.
- 212) Mukherjee, M., Katsavelis, D., Stergiou, N. The effect of virtual reality on locomotor adaptation. Proceedings of the University of Nebraska Centennial Celebration of Student Research and Creative Activity, Omaha, Nebraska, March 2009.
- 213) Myers, S.A., Koutakis, P., Stergiou, N. Induced lower extremity vascular occlusion affects gait variability. Proceedings of the University of Nebraska Centennial Celebration of Student Research and Creative Activity, Omaha, Nebraska, March 2009.
- 214) Siu, K.C., Stergiou, N. Type of music influences performance in robotic surgery. Proceedings of the University of Nebraska Centennial Celebration of Student Research and Creative Activity, Omaha, Nebraska, March 2009.
- 215) Suh, I., Stergiou, N. Examination of a novel robot-assisted surgical training program by comparing subjective and objective evaluations. Proceedings of the University of Nebraska Centennial Celebration of Student Research and Creative Activity, Omaha, Nebraska, March 2009.
- 216) Kyvelidou, A., Harbourne, R., Stuberg, W., Stergiou, N. Reliability of COP measurements during sitting in developmental delayed infants. Proceedings of the American Physical Therapy Association Combined - Sections Meeting, Las Vegas, Nevada, February 2009.
- 217) Ristanis, S., Georgoulis, A.D., Patras, K., Ziogas, G., Tsepis, E., Stergiou, N. Diminished neuromuscular activation during high intensity aerobic running after ACL reconstruction. Societe Francaise D'Arthroscopie, Paris, France, December 2008.
- 218) Ristanis, S., Siarava, E., Giotis, D., Zambeli, F., Georgoulis, A.D., Stergiou, N. An in vivo investigation of the effect of the femoral tunnel placement during ACL reconstruction on tibial rotation. Societe Francaise D'Arthroscopie, Paris, France, December 2008.
- 219) Decker, L.M., Rodríguez-Aranda, C., Myers, S.A., Stergiou, N. Cognitive performance on high-demanding tasks affects gait variability in healthy young adults. Proceedings of The Society for Neuroscience's 38<sup>th</sup> Annual Meeting, Washington, D.C., November 2008.
- 220) Rodríguez-Aranda, C., Decker, L.M., Myers, S.A., Stergiou, N. Interplay between gait and attention: The unfavorable effects of walking on learning and cognitive performance of high demanding tasks. Proceedings of The Society for Neuroscience's 38<sup>th</sup> Annual Meeting, Washington, D.C., November 2008.
- 221) Deffeyes, J.E., Harbourne, R.T., Kyvelidou, A., Stuberg, W.A., Stergiou, N. Largest Lyapunov exponent shows infant sitting postural sway is chaotic. Proceedings of The Society for Neuroscience's 38<sup>th</sup> Annual Meeting, Washington, D.C., November 2008.
- 222) Siu, K-C, Suh, I.H., Mukherjee, M., James, E., Oleynikov, D., Stergiou, N. Type of music influences motor skills acquisition in robotic surgery. Proceedings of The Society for Neuroscience's 38<sup>th</sup> Annual Meeting, Washington, D.C., November 2008.

- 223) Mukherjee, M., Katsavelis, D., Stergiou, N. The effect of virtual reality on locomotor adaptation. Proceedings of The Society for Neuroscience's 38<sup>th</sup> Annual Meeting, Washington, D.C., November 2008.
- 224) Lee, H.I., Siu, K-C, Mukherjee, M., James, E., Oleynikov, D., Stergiou, N. Examination of a novel robot-assisted surgical training program by comparing subjective and objective evaluations. Poster presentation at the 94<sup>th</sup> Annual Clinical Congress of the American College of Surgeons, San Francisco, California, October 2008.
- 225) Koutakis, P., Myers, S.A., Johanning, J.M., Pipinos, I.I., Stergiou, N. Bilateral intermittent claudication affects joint powers during gait. Poster presentation at the Fourth North American Congress on Biomechanics (NACOB 2008), Ann Arbor, Michigan, August 2008.
- 226) Myers, S.A., Pipinos, I.I., Johanning, J.M., Stergiou, N. Induced lower extremity vascular occlusion affects gait variability. Poster presentation at the Fourth North American Congress on Biomechanics (NACOB 2008), Ann Arbor, Michigan, August 2008.
- 227) Huisinga, J.M., Filipi, M., Stergiou, N. Resistance training alters joint powers in Multiple Sclerosis patients. Poster presentation at the Fourth North American Congress on Biomechanics (NACOB 2008), Ann Arbor, Michigan, August 2008.
- 228) Kochi, N., Decker, L.M., Katsavelis, D., Stergiou, N. The minimum number of data points required to compute approximate entropy for gait data. Poster presentation at the 16<sup>th</sup> Congress of the European Society of Biomechanics, Lucerne, Switzerland. July 2008.
- 229) Lee, I.H., Siu, K-C, Mukherjee, M., Oleynikov, D., Stergiou, N. A Novel Training Program for Learning Robot-Assisted Surgery. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity (NASPSPA) 2008, Niagara Falls, Ontario. June 2008.
- 230) Myers, S.A., Stergiou, N., Pipinos, I.I., Johanning, J.M., Blanke, D., Chen, S-J. Nonlinear measures indicate gait variability is altered by Peripheral Arterial Disease. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity (NASPSPA) 2008, Niagara Falls, Ontario. June 2008.
- 231) Smith, B.A., Stergiou, N., Ulrich, B.D. Development of gait periodicity in new walkers with Down syndrome: a mathematical perspective. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity (NASPSPA) 2008. Niagara Falls, Ontario. June 2008.
- 232) Harbourne, R.T., Kyvelidou, A., Deffeyes, J.E., & Stergiou, N. The Effect of Stochastic Noise to Improve Sitting Postural Control in Infants with Moderate to Severe Cerebral Palsy. Poster presentation at the North American Society for the Psychology of Sport and Physical Activity (NASPSPA) 2008, Niagara Falls, Ontario. June 2008.
- 233) Lee, I.H., Siu, K.C., Katsavelis, D., Oleynikov, D., Stergiou, N. Nonlinear Analysis Quantifies Learning in Robot-Assisted Laparoscopic Surgery. Poster presentation at the Society of American Gastrointestinal Endoscopic Surgeons (SAGES) Annual Meeting, Philadelphia, Pennsylvania, April 2008.
- 234) Stergiou, N., Deffeyes, J., Harbourne, R.T., DeJong, S.L., Kyvelidou, A., Stuber, W.A. Nonlinear analysis of sitting postural sway indicates developmental delay in infants. Poster presented at the XVI<sup>th</sup> Biennial International Conference on Infant Studies, Vancouver, Canada, March 2008.
- 235) Kyvelidou, A., Harbourne, R.T., Deffeyes, J.E., Stuber, W.A., Sun, J., Stergiou, N. Reliability of body sway measurements during infant sitting posture development. Poster presented at the XVI<sup>th</sup> Biennial International Conference on Infant Studies, Vancouver, Canada, March 2008.

- 236) Harbourne, R.T., Deffeyes, J.E., DeJong, S.L., Kyvelidou, A., Stuber, W.A., Willett, S., Stergiou, N. Efficacy of a Perceptual-Motor Intervention for Sitting Postural Control in Children with Moderate to Severe Cerebral Palsy Using Measures of Complexity. Poster presented at the XVI<sup>th</sup> Biennial International Conference on Infant Studies, Vancouver, Canada, March 2008.
- 237) Willett, S.L., Harbourne, R.T., DeJong, S.L., Stergiou, N. A comparison of developing sitting postural control in 2 infants receiving different treatment approaches. Poster presentation at the 2008 American Physical Therapy Association Combined Sections Meeting, Nashville Tennessee, February, 2008.
- 238) Siu, K-C, Brown-Clerk, B., Lee, I.H., Katsavelis, D., Oleynikov, D., Stergiou, N. The Negative Impact of Noisy Environment on Robotic Surgery. Poster presentation at the Society for Neuroscience Chapter Annual Meeting, Boystown National Research Hospital. Omaha, Nebraska, December 2007.
- 239) Stergiou, N., Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Kyvelidou, A., Stuber, W.A. Quantitative measures of development of neuromuscular control in infant sitting. Poster presentation at Neuroscience 2007, the 37<sup>th</sup> annual meeting of the Society for Neuroscience, San Diego, California, November 2007.
- 240) Siu, K-C, Brown-Clerk, B., Lee, I.H., Katsavelis, D., Oleynikov, D., Stergiou, N. The Negative Impact of Noisy Environment on Robotic Surgery. Poster presentation at Neuroscience 2007, the 37<sup>th</sup> annual meeting of the Society for Neuroscience. San Diego, California, November 2007.
- 241) Myers, S.A., Stergiou, N., Pipinos, I.I., Johanning, J.A., Kochi, N. PAD causes alterations in the variability of gait patterns. Poster presentation at the American Society of Biomechanics 2007 Annual Meeting, Stanford, California, August 2007.
- 242) Kyvelidou, A., Stuber, W.A., Harbourne, R.T., DeJong, S.L., Deffeyes, J.E., Sun, J., Stergiou, N. Test-Retest Reliability of Sitting Posture in Typically Developing Infants. Poster presentation at the American Society of Biomechanics 2007 Annual Meeting, Stanford, California, August 2007.
- 243) Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Stuber, W.A., Kyvelidou, A., Stergiou, N. Approximate Entropy is Robust to Non-Stationarity in Analysis of Infant Sitting Postural Sway. Poster presentation at the American Society of Biomechanics 2007 Annual Meeting, Stanford, California, August 2007.
- 244) Brown-Clerk, B., Siu, K-C, Katsavelis, D., Lee, I.H., Oleynikov, D., Stergiou, N. Electromyographic Activity Determines Task Difficulty for Robotic Laparoscopic Training Programs. Poster presentation at the XXI Congress of the International Society of Biomechanics, Taipei, Taiwan, July 2007.
- 245) Stergiou, N., Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Kyvelidou, A., Stuber, W.A. Lyapunov exponent correlations with range of postural sway as an indicator of delayed development of sitting. Poster Presentation at ISPGR 2007, Vermont, (International Society for Posture and Gait Research) 18<sup>th</sup> International Conference, Burlington, Vermont, July 2007.
- 246) Tanwar, H., Decker, L., Huisinga, J.M., Stergiou, N. Design and validation of low cost wireless system to evaluate gait variability. Poster presentation at the ISPGR 2007, Vermont, (International Society for Posture and Gait Research) 18<sup>th</sup> International Conference, Burlington, Vermont, July 2007.
- 247) Siu, K-C., Lee, I.H., Brown-Clerk, B., Katsavelis, D., Oleynikov, D., Stergiou, N. Nonlinear analysis validate the need to learn surgical skill. Presented at the 2007 NASPSA Conference, San Diego California, June 2007.

- 248) Katsavelis, D., Siu, K-C, Brown-Clerk, B., Lee, I.H., Oleynikov, D., Stergiou, N. Learning robotic surgical skills with a virtual reality environment. Presented at the 2007 NASPSPA Conference, San Diego, California, June 2007.
- 249) Ristanis, S., Chouliaras, V., Moraiti, C., Stergiou, N., and Georgoulis, A.D. Current Autografts used for ACL Reconstruction do not restore tibial rotation during pivoting. Poster presentation at the ISAKOS 6<sup>th</sup> Biennial Congress, (International Society of Arthroscopy and Knee Surgery and Orthopedic Sports Medicine) 2007, Florence, Italy, May 2007.
- 250) Moraiti, T., Stergiou, N., Vasiliadis, V., Tzimas, Patras, K., Ristanis, S., Georgoulis, A.D. Patellar Tendon vs Hamstrings Graft: How effective are they in restoring walking dynamics after ACL reconstruction. Poster presentation at the ISAKOS 6<sup>th</sup> Biennial Congress, (International Society of Arthroscopy and Knee Surgery and Orthopedic Sports Medicine) 2007, Florence, Italy, May 2007.
- 251) Kyvelidou, A., Stuberger, W.A., Harbourne, R.T., DeJong, S.L., Deffeyes, J.E., & Stergiou, N. Frequency Domain Analysis of the Center of Pressure Time Series During Sitting In Typically Developing Infants and Infants with Developmental Delays. Poster presentation at the Gait & Clinical Movement Analysis Society 12<sup>th</sup> Annual Meeting, Springfield, Massachusetts. April 2007.
- 252) DeJong, S.L., Harbourne, R.T., Kyvelidou, A., Stuberger, W.A., Deffeyes, J.E., Stergiou, N. Kinematics of sitting postural control in typically developing infants. Poster presentation at the Gait & Clinical Movement Analysis Society 12<sup>th</sup> Annual Meeting, Springfield, Massachusetts, April 2007.
- 253) Kyvelidou, A., Stergiou, N., Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Stuberger, W.A., Blanke, D. Development of upper body coordination during sitting in typically developing infants. Poster presentation at the SRCD Biennial Meeting (Society for Research in Child Development.), Massachusetts, March 2007.
- 254) Ristanis, S., Stergiou, N., Moraiti, C., Chouliaras, V., Georgoulis, A.D. The Effectiveness of ACL Reconstruction with Quadrupled Hamstrings and BPTB Auto grafts. An in-vivo study comparing tibial rotation. Poster presentation at the Orthopedic Research Society 2007, San Diego, California, March 2007.
- 255) Stergiou, N. Biomechanical Investigation of the Development of Sitting Postural Control in Infants. Display Presented at the 2007 Nebraska Research and Innovation Conference, Omaha, Nebraska, March 2007.
- 256) Judkins, T.N., Oleynikov, D., Bochkarev, V., Stergiou, N. Validation of Robotic Surgical Skill Assessment Using Subjective Expert Evaluation. Poster presentation at the Medicine Meets Virtual Reality 15 convention, Long Beach, California, February 2007.
- 257) Fiedler, M.J., Chen, S-J, Judkins, T.N., Oleynikov, D, Stergiou, N. Virtual Reality for Robotic Laparoscopic Surgical Training. Poster presentation at the Medicine Meets Virtual Reality 15 convention, Long Beach, California, February 2007.
- 258) Kyvelidou, A., Ehlers, J.L., Kurz, M.J., and Stergiou, N. The effects of age and partial body weight support on kinematic variability during treadmill walking. Poster presentation at the 30<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.
- 259) Katsavelis, D., Kyvelidou, A. and Stergiou, N. The effect of fatigue on movement variability during running. Poster presentation at the 30<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.
- 260) Kochi, N., Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Stuberger, W.A., Kyvelidou, A., and Stergiou, N. A new method of determining the structure of biological time series by using

- approximate entropy and changing lag values. Poster presentation at the 30<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.
- 261) Kurz, M.J., Stergiou, N. Can hip joint actuations be used to control the structure of chaotic locomotion? Poster presentation at the 30<sup>th</sup> Annual Meeting of the American Society of Biomechanics. Blacksburg, Virginia, September 2006.
  - 262) Katsavelis, D., Kyvelidou, A., Stavropoulos, N., Stergiou, N. Neuromuscular induced fatigue increases running kinematic variability. Presented at the North American Society for the Psychology of Sport and Physical Activity, Denver, Colorado, June 2006.
  - 263) Chouliaras, V., Ristanis, S., Moraiti, C., Tzimas, V., Stergiou, N., Georgoulis, A.D. (2006). ACL reconstruction with a quadrupled hamstrings tendon autograft does not restore tibial rotation to normative levels during landing from a jump and subsequent pivoting. Presented at the 12<sup>th</sup> ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress in Innsbruck, Austria, May 2006.
  - 264) Moraiti, C., Stergiou, N., Ristanis, S., Georgoulis, A. Alterations in stride-to-stride variability after ACL rupture as measured using nonlinear methodology. Presented at the 12<sup>th</sup> ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress in Innsbruck, Austria, May 2006.
  - 265) Moraiti, C., Vasiliadis, H., Tzimas, V., Lee, C., Ristanis, S., Stergiou, N., Georgoulis, A. Patellar Tendon vs Hamstrings graft: Variability changes in knee flexion/extension movement patterns during walking. Presented at the 12<sup>th</sup> ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress in Innsbruck, Austria, May 2006.
  - 266) Volkman, K., Stergiou, N., Stuberg, W., Blanke, D., Stoner, J.A. Effects of measurement method and subject characteristics on the functional reach test in typically developing children. Presented at the Combined Sections Meeting of the American Physical Therapy Association, San Diego, California, February 2006.
  - 267) Stergiou, N., Harbourne, R.T., Deffeyes, J.E., DeJong, S.L., Stuberg, W.A. The dynamics of development of sitting postural control. Presented at the National Center for Medical Rehabilitation Research Biennial Training Workshop, Rockville, Maryland, December 2005.
  - 268) Wristen, B., Stergiou, N., Evans, S. Using three dimensional motion capture technology to describe and assess piano technique: A case study. Presented at the National Conference on Keyboard Pedagogy, Oak Brook, Illinois, August 2005.
  - 269) Judkins, T.N., Scott-Pandorf, M.M., Pipinos, I.I., Stergiou, N. The effect of peripheral arterial disease on gait: frequency response of ground reaction forces. Presented at the Progress in Motor Control V Convention, State College, Pennsylvania, August 2005.
  - 270) Hurt, C.P., Hreljac, A., Kurz, M.J., Stergiou, N. Is there a gait transition between run and sprint? Presented at the XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Cleveland, August 2005.
  - 271) Judkins, T.N., Narazaki, K., Oleynikov, D., Stergiou, N. Electromyographic correlates of robotic laparoscopic training. Presented at the XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
  - 272) Kurz, M.J., Stergiou, N. An artificial neural network that explores the role of sensory information for learning the neural connections for locomotion. Presented at the XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.

- 273) Kurz, M.J., Stergiou, N., Markopoulou, E., Buzzi, U. An Inverted Pendulum Model Indicates that Parkinson's disease results in Altered Neuromuscular Stiffness for Controlling Gait. Presented at the XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 274) Miller, D., Stergiou, N., Kurz, M.J. An improved surrogate method for detecting the presence of chaos in gait. Presented at the XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 275) Narazaki, K., Oleynikov, D., Pandorf, J.J., Stergiou, N. Training and performance of robotic laparoscopy: Electromyographic analysis to quantify the extent of proficiency. Presented at the XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 276) Scott-Pandorf, M.M., Pipinos, I.I., Judkins, T, Stergiou, N. The effect of peripheral arterial disease on gait. Presented at the XX<sup>th</sup> Congress of International Society of Biomechanics and 29<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 277) Judkins, T.N., Narazaki, K., Oleynikov, D., Stergiou, N. Electromyographic frequency response of robotic laparoscopic training. Presented at the IEEE 9<sup>th</sup> International Conference on Rehabilitation Robotics, Chicago, Illinois, July 2005.
- 278) Georgoulis, A.D., Moraiti, T., Ristanis, S., Stergiou, N. Nonlinear methods can be used as tests of dynamic functional knee stability during clinical gait analysis. Presented at the American Orthopaedic Society of Sports Medicine (AOSSM), Keystone, Colorado, July 2005.
- 279) Narazaki, K., Oleynikov, D., Pandorf, J.J., Solomon, B.M., Stergiou, N. The effects of training on the performance of robotic laparoscopy: What are the objective variables to quantify learning? Presented at the Society of American Gastrointestinal Endoscopic Surgeons Annual Meeting, Hollywood, Florida, April 2005.
- 280) Cavanaugh, J.T., Guskiewicz, K.M., Stergiou, N. New insights into the recovery of postural control after cerebral concussion. Presented at the Sports Physical Therapy Section at the Combined Sections Meeting of the American Physical Therapy Association, New Orleans, Louisiana, February 2005.
- 281) Georgoulis, A.D., Ristanis, S., Patras, K., Tsepis, E., Moraiti, T., Stergiou, N. Motion analysis evaluation, 2 years after ACL reconstruction, shows that tibial rotation is not restored during high demanding activities. Presented at the 51<sup>st</sup> Annual Meeting of the Orthopaedic Research Society, Washington, D.C., February 2005.
- 282) Georgoulis, A., Ristanis, S., Patras, K., Moraiti, C., Giakas, G., Stergiou, N. Tibial Rotation remains a problem one year after ACL reconstruction, during sport activities. 72<sup>nd</sup> Annual Meeting of the American Academy of Orthopaedic Surgeons, AOSSM Specialty Day, Washington DC, February 2005.
- 283) Kurz, M.J., Stergiou, N. An artificial neural network that utilizes a chaotic control scheme for stable locomotion. Presented at the 28<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Portland, Oregon, September 2004.
- 284) Korellis, G., Wutzke, C.J., Kurz, M.J., Stergiou, N. Nonlinear analysis of postural control in different positions. Presented at the 28<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Portland, Oregon, September 2004.
- 285) Kurz, M.J. Stergiou, N. Walking with a chaotic gait pattern in a reduced gravity environment. Presented at the North American Society for the Psychology of Sport and Physical Activity (NASPSPA) annual meeting, Vancouver, Canada, June 2004.



- 286) Cavanaugh, J.T., Guskiewicz, K.M., Stergiou, N. Detecting altered postural control after cerebral concussion in athletes without postural instability. Presented at the 51st Annual Meeting of the American College of Sports Medicine, Indianapolis, Indiana, June 2004.
- 287) Harbourne, R., Stergiou, N., Tscharnuter, I., DeJong, S. Nonlinear analysis of sitting postural control in infants with and without movement disorders. Presented at the North American Society for the Psychology of Sport and Physical Activity (NASPPSA) Annual Meeting, Vancouver, Canada, June 2004.
- 288) Markopoulou, K., Kurz, M.J., Buzzzi, U.H., Stergiou, N. Gait dynamics in Parkinson's Disease. Presented at the 56<sup>th</sup> Annual Meeting of the American Academy of Neurology. San Francisco, California, April 2004.
- 289) Moraiti, T., Stergiou, N., Ristanis, S., Georgoulis, A.D. The effect of walking speed on the stability of the ACL deficient knee. Presented at the International Symposium of Ligaments and Tendons IV, San Francisco, California, March 2004.
- 290) Georgoulis, A.D. Moraiti, T., Stergiou, N., Giakas, G., Ristanis, S., Soucacos, P.N. Assessment of gait patterns in ACL deficient patients using the nonlinear dynamics theory. Presented at the 71<sup>st</sup> Annual Meeting of the American Association of Orthopaedic Surgeons, San Francisco, California, March 2004.
- 291) Moraiti, T., Stergiou, N., Giakas, G., Ristanis, S., Georgoulis, A.D. Stability of the ACL deficient knee in different walking speeds. Presented at the 50<sup>th</sup> Annual Meeting of the Orthopaedic Research Society, San Francisco, California, March 2004.
- 292) Ristanis, S., Stergiou, N., Basileiadis, H., Patras, K., Giakas, G., Georgoulis, A.D. Tibial rotation remains a problem one year after ACL reconstruction during high demanding activities. Presented of the 50<sup>th</sup> Annual Meeting of the Orthopaedic Research Society, San Francisco, California, March 2004.
- 293) Kurz, M.J., Stergiou, N. A period doubling cascade that leads to a chaotic gait pattern in a passive dynamic walking model. Presented at the North American Society of the Psychology of Sport and Physical Activity Annual Meeting, Savannah, Georgia, June 2003.
- 294) Ristanis, S., Giakas, G., Moraiti, T., Stergiou, N., Georgoulis, A.D., Soucacos, P.N. Internal-external rotation of the knee joint after ACL reconstruction. Presented at the VII<sup>th</sup> International Olympic Committee (IOC) World Congress on Sport Sciences, Athens, Greece, October 2003.
- 295) Kurz, M.J., Stergiou, N., Foster, T. Controlling bifurcations and chaotic gait with hip joint actuations in a simple walking model. Presented at the 27<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 296) Keenan, S.M., Stergiou, N., Kurz, M.J., Heidel, J., Blanke, D. The stability of the Lyapunov Exponent at different sampling frequencies during treadmill walking. Presented at the 27<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 297) Cavanaugh, J., Guskiewicz, K., Stergiou, N. Effect of cerebral concussion on the complexity of center of pressure time series in collegiate athletes. Presented at the 27<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 298) Hreljac, A., Stergiou, N., Imamura, R., Caseblot, J., Sison, M. Ankle and knee joint kinetics during running and sprinting. Presented at the 27<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 299) Scott, M.M., Stergiou, N. Baseline measures are altered in biomechanical studies. Presented at the 27<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.

- 300) Moraiti, T., Giakas, G., Stergiou, N., Papageorgiou, C.D., Tsepis, E., Ristanis, S., Georgoulis, A.D. Three-dimensional gait analysis of ACL deficient patients using chaos theory. Presented at the 4<sup>th</sup> Biennial Congress of the International Society of Arthroscopy Knee surgery and Orthopaedic Sports medicine, Auckland, New Zealand, March 2003.
- 301) Giakas, G., Moraiti, T., Ristanis, S., Tsepis, E., Papageorgiou, C.D., Stergiou, N., Georgoulis, A.D. Changes in the single step balance of ACL deficient patients before and after low demand exercise. Presented at the 4<sup>th</sup> Biennial Congress of the International Society of Arthroscopy Knee surgery and Orthopaedic Sports medicine, Auckland, New Zealand, March 2003.
- 302) Ristanis, S., Giakas, G., Papageorgiou, C.D., Moraiti, T., Tsepis, E., Stergiou, N., Siavara, E., Georgoulis, A.D. Internal-External rotation of the knee joint after ACL reconstruction during step down and turning. Presented at the 70<sup>th</sup> Annual meeting of the American Academy of Orthopaedic Surgeons New Orleans, Louisiana, February 2003.
- 303) Kurz, M.J., Stergiou, N., Millhollin, C. Response surface curvature suggests the elderly have altered kinematic variability due to joint interactions. Presented at the Annual Meeting of North American Society for the Psychology of Sport and Physical Activity, Baltimore, Maryland, May 2002.
- 304) Scott, M.M., Stergiou, N., Kurz, M.J. Response surface modeling suggests that interactive kinematic strategies change with aging. Presented at the Annual Meeting of North American Society for the Psychology of Sport and Physical Activity, Baltimore, Maryland, May 2002.
- 305) Kurz, M.J., Stergiou, N., Scott, M.M. Individuals with ACL reconstruction display altered coordination strategies while walking and running. Presented at the IV<sup>th</sup> World Congress of Biomechanics, Calgary, Canada, August 2002.
- 306) Kurz, M.J., Stergiou, N., Millhollin, C.M. Variability of the lower extremity segmental couplings indicates that elderly gait is less stable during stance. Presented at the IV<sup>th</sup> World Congress of Biomechanics, Calgary, Canada, August 2002.
- 307) Kurz, M.J., Stergiou, N. Individuals with ACL reconstruction display altered long-range fractal gait patterns. Presented at the IV<sup>th</sup> World Congress of Biomechanics, Calgary, Canada, August 2002.
- 308) Kurz, M.J., Stergiou, N., McCormick, K. Markov model suggests neuromuscular aging affects short-range correlations present in the gait cycle. Presented at the IV<sup>th</sup> World Congress of Biomechanics, Calgary, Canada, August 2002.
- 309) Buzzi, U.H., Stergiou, N., Markopoulou, E. A dynamical analysis of parkinsonian gait. Presented at the IV<sup>th</sup> World Congress of Biomechanics, Calgary, Canada, August 2002.
- 310) Keenan, S.M., Stergiou, N. The reliability of the Lyapunov Exponent during treadmill walking. Presented at the IV<sup>th</sup> World Congress of Biomechanics, Calgary, Canada, August 2002.
- 311) Keenan, S.M., Stergiou, N. The effect of speed on the determinist origin of the variability present during human locomotion. Presented at the IV<sup>th</sup> World Congress of Biomechanics, Calgary, Canada, August 2002.
- 312) Hreljac, A. Stergiou, N., Scholten, S.D. Lower extremity joint power when running over obstacles. Presented at the 25<sup>th</sup> Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 313) Kurz, M.J., Stergiou, N. Neuromuscular variability during locomotion is affected by footwear. Presented at the 25<sup>th</sup> Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.

- 314) Kurz, M.J., Stergiou, N. The spanning set defines variability in locomotive patterns. Presented at the 25<sup>th</sup> Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 315) Dierks, T.A., Stergiou, N., Buzzi, U.H., Keenan, S.M., Heidel, J. The effect of speed on performer variability during locomotion. Presented at the 25<sup>th</sup> Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 316) Buzzi, U.H., Stergiou, N., Giakas, G., Dierks, T.A. The effect of ACL reconstruction on locomotor variability. Presented at the 25<sup>th</sup> Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 317) Giakas, G. Stergiou, N. The effects of lateral loading on the ground reaction force measurements during walking on young and elderly females. Presented at the 18<sup>th</sup> Congress of the International Society of Biomechanics. Zurich, Switzerland, July 2001.
- 318) Stergiou, N., Buzzi, U.H., Hageman, P.A., Heidel, J. A chaotic analysis of gait parameters in different age groups. Presented at the 24<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Chicago, Illinois, August 2000.
- 319) Stergiou, N., Scholten, S.D., Houser, J., Dierks, T., Blanke, D. Segmental interactions during running over obstacles of increasing height. Presented at the 24<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Chicago, Illinois, August 2000.
- 320) Byrne, J.E., Stergiou, N., Hageman, P.A., Blanke, D., Buzzi, U.H. The effects of lateral loading on intralimb coordination during walking on young and elderly females. Presented at the 24<sup>th</sup> Annual Meeting of the American Society of Biomechanics, Chicago, Illinois, August 2000.
- 321) Hreljac, A., Stergiou, N., Scholten, S. D. Joint reaction forces and moments of the ankle and knee when running over obstacles of varying height. Presented at the XXV Congress de la Societe de Biomecanique combined with the XI<sup>th</sup> Congress of the Canadian Society for Biomechanics, Montreal, Quebec, August 2000.
- 322) Houser, J., Stergiou, N., Scholten, S.D., Layne, C.S. Lower extremity coordination during walking over obstacles with shoes of different traction. Presented at the Annual Meeting of North American Society for the Psychology of Sport and Physical Activity, San Diego, California, June 2000.
- 323) Scholten, S.D., Stergiou, N., Houser, J., Blanke, D. Footstrike patterns during running over obstacles of different heights. Presented at the 23rd Annual Meeting of the American Society of Biomechanics, Pittsburgh, Pennsylvania, October 1999.
- 324) Stergiou, N., Jensen, J.L., Bates, B.T., Houser J. A Dynamical Systems investigation of lower extremity coordination during running. Presented at the XVII<sup>th</sup> Congress of the International Society of Biomechanics, Calgary, Canada, August 1999.
- 325) Kurz, M.J., Stergiou, N. A Dynamical Systems Theory approach to evaluate the influence of midsole hardness on intra-limb coordination strategies. Presented at the Annual Meeting of the Gait and Clinical Movement Analysis Society, Dallas, Texas, March 1999.
- 326) Houser, J., Stergiou, N., Scholten, S., Noble, J., Tzetzis, G. Study of obstructed locomotion: Implications for the elderly and sports. Presented at the Sixth International Congress on Physical Education and Sport, Komotini, Greece, May 1998.
- 327) Kourtesis, T., Derri, V., Tzetzis, G., Mihalopoulou, M., Stergiou, N., Kioumourtzoglou, E. Motor assessment of 9-year old greek school children. Annual Convention of the American Alliance for Health, Physical Education, Recreation and Dance, Reno, Nevada, April 1998.
- 328) Kurz, M.J., Stergiou, N. Effects of high-top athletic shoes on altering muscular strength due to sensory feedback and its relationship with lower extremity injuries. Annual Convention of

- the American Alliance for Health, Physical Education, Recreation and Dance, Reno, Nevada, April 1998.
- 329) Tzetzis, G., Mihalopoulou, M., Kourtesis, T., Derri, V., Kioumourtzoglou, E., Stergiou, N. Feedback and goal setting as determinants of performance and learning motor skills. Annual Convention of the American Alliance for Health, Physical Education, Recreation and Dance, Reno, Nevada, April 1998.
- 330) Tzetzis, G., Mihalopoulou, M., Kourtesis, T., Stergiou, N. The effect of different content of instruction on performance and learning simple basketball skills. Annual Convention of the North American Society for Psychology of Sport and Physical Activity, St. Charles, Illinois, June 1998.
- 331) Stergiou, N., Bates, B.T., James, S.L. Mechanisms associated with running injuries. Annual Convention of the American College of Sports Medicine, Denver, Colorado, May 1997.
- 332) Stergiou, N., Kurz, M.J., Tzetzis, G. Strength comparisons of a university's female college basketball team fifteen years ago and today. Presented at the 5<sup>th</sup> International Congress on Physical Education and Sport, Komotini, Greece, May 1997.
- 333) Stergiou, N., Crussemeyer, J.A., Bates, B.T. Strategy selection with speed and height perturbations. Ninth Biennial Conference of the Canadian Society for Biomechanics, Burnaby, British Columbia, Canada, August 1996.
- 334) Crussemeyer, J.A., Bates, B.T., Stergiou, N., Domenigoni, A. Effects of midsole arch support on subtalar and knee joint function. Annual Convention of the American Alliance for Health, Physical Education, Recreation and Dance, Atlanta, Georgia, April 1996.
- 335) Stergiou, N., Tzetzis, G. The comparison of three dual action exercise testing machines in providing a total body workout. Presented at the Third International Congress on Physical Education and Sport, Komotini, Greece, May 1995.
- 336) Stergiou, N., Bates, B.T., Schneider, J.A. The effects of stride length on lower extremity joint moments of force and powers. Annual Convention of the American Alliance for Health, Physical Education, Recreation and Dance, Portland, Oregon, March 1995.
- 337) Stergiou, N., Bates, B.T. Performance accommodation to midsole hardness during running. Annual Northwest American College of Sports Medicine, Kirkland, Washington. February 1995.
- 338) Stergiou, N., Costa, G., Tzetzis, G. Methodology and evaluation of running sports footwear. Presented at the First International Congress on Physical Education and Sport, Komotini, Greece, May 1993.
- 339) Stergiou, N., Blanke, D., Thigpen, K.L., Bates, B.T. Running with running shoes versus barefoot running: A videographical analysis. Presented at the Annual Northwest American College of Sports Medicine, Seattle, Washington, February 1992.
- 340) Stergiou, N., Bates B.T., Davis H.P. The effects of midsole hardness on shoe cushioning. Presented at the Second North American Congress on Biomechanics, Chicago, Illinois, March 1992.
- 341) Bates, B.T., Hamill, J., Davis, H.P., Stergiou, N. Surface and shoe effects on lower extremity impact characteristics. Presented at the Second North American Congress on Biomechanics, Chicago, Illinois, March 1992.