

CURRICULUM VITAE

NICK STERGIOU, PH.D.

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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 **Associate Dean** – College of Education, Health, and Human Sciences
(8/2025 – Present) University of Nebraska Omaha Omaha, Nebraska
- Present **Director** – Division of Biomechanics and Research Development (**Founding Director**)
(8/2017 – Present) University of Nebraska Omaha Omaha, Nebraska
- Present **Full Professor** – Department of Biomechanics (**Founding Chair**)
(8/2015 – Present) University of Nebraska Omaha Omaha, Nebraska
- Present **Director** – Center for Research in Human Movement Variability (**Founding Director**)
(8/2014 - Present) University of Nebraska Omaha Omaha, Nebraska
- Present **Full Professor (part time)** - Department of Environmental, Agricultural and Occupational Health Sciences (**Founding Faculty Member**)
(7/2007 – Present) University of Nebraska Medical Center Omaha, Nebraska
- Present **Full Professor (part-time)** - Department of Physical Education & Sport Science
(1/2023 – Present) Aristotle University of Thessaloniki Thessaloniki, Greece
- Present **Director** - Biomechanics Research Building (**Founding Director**)
(8/2013 – Present) University of Nebraska Omaha Omaha, Nebraska
- 2025 **Assistant Dean** – College of Education, Health, and Human Sciences
(8/2017 – 7/2025) University of Nebraska Omaha Omaha, Nebraska
- 2020 **Chair** – Department of Biomechanics (**Founding Chair**)
(8/2015 – 6/2020) University of Nebraska Omaha Omaha, Nebraska
- 2015 **Full Professor** - School of Health, Physical Education and Recreation (HPER)
(8/2005 – 8/2015) University of Nebraska Omaha Omaha, Nebraska
- 2014 **Chair of the Exercise Science Doctoral Program** - School of HPER (**Founding Chair**)
(8/2011 – 8/2014) University of Nebraska Omaha Omaha, Nebraska

2014 **Director - Center for Research in Biomechanics (Founding Director)**
(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 (Founding Director)**
(8/1996 – 8/2013) University of Nebraska Omaha Omaha, Nebraska

2012 **Graduate Program Chair - Dept. of Environmental, Agricultural and Occupational Health (Founding Chair)**
(8/2007 – 8/2012) University of Nebraska Medical Center Omaha, Nebraska

2011 **Chief Scientific Consultant - Orthopedic and Sports Center of Ioannina**
(8/2000 – 8/2011) University of Ioannina Medical Center Ioannina, Greece

2005 **Associate Professor - School of HPER**
(8/2002 – 5/2005) University of Nebraska Omaha Omaha, Nebraska

2002 **Assistant Professor - School of HPER**
(8/1996 – 5/2002) University of Nebraska Omaha Omaha, Nebraska

1995 **Graduate Assistant - Department of Exercise and Movement Science**
(9/1991 – 6/1995) University of Oregon Eugene, Oregon

1995 **Instructor - Service Physical Education Program**
(9/1991 – 6/1995) University of Oregon Eugene, Oregon

1991 **Graduate Assistant - School of HPER**
(8/1989 – 5/1991) University of Nebraska Omaha Omaha, Nebraska

OTHER SIGNIFICANT EXPERIENCE

1996 **Sergeant Army Infantry - Greek/NATO Army Service**
(9/1995 – 5/1996) Greece

HIGHLIGHTS

- **PROVEN LEADERSHIP, STRATEGIC THINKER AND VISIONARY**: Started at UNO in 1996, teaching three courses per semester at a time when “Biomechanics” did not even exist as a term anywhere in the entire University of Nebraska system. I was given a small 900 sqft classroom as a laboratory with archaic equipment and no start-up funds. Transformed this into the Biomechanics Research Building (BRB) which opened in 2013 with 23,000 square feet of space. The building was expanded by 30,000 square feet in October 2019. A new expansion is planned for 2027 for another 23,000 square feet. Currently, it houses more than 100 personnel and is the home of the Division of Biomechanics and Research Development.
 - 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’s the only space at UNO that’s VA leased. It is also commended through various awards for strong integrity, ethics, cultural diversity, and innovation.
 - The Department of Biomechanics, which I founded in 2016, received the UNEMED Innovator of the Year Award for 2019. This was the first time the award went to a department within the University of Nebraska system.
- **ADMINISTRATIVE EXCELLENCE**: Created the Department of Biomechanics and the Center of Research in Human Movement Variability (MOVCENTR; funded since 2013 by the NIH through a P30 and now a P20) at the University of Nebraska Omaha (UNO). Both units are the first of their kind in the world. Created the Division of Biomechanics and Research Development which houses the above two units, the Center for Cardiovascular Research in Biomechanics (funded since 2022 from the NIH through a P30), and the Nebraska Center for 3D Innovation (funded since 2026 from the NSF). The Division is housed in the Biomechanics Research Building which I raised the donations to be created and expanded twice.
 - Served as the Coordinator of Research and Creative Activity at the UNO College of Education health and Human Sciences (equivalent to Assistant Dean of Research) and led the College from 44 to 69 external submissions and from 11.4 to 23.3 million dollars in the two years (2010-2012) of my service.
 - Served as the Founding Chair of the UNO Department of Biomechanics and led the department from 3 tenured-track faculty members in 2015 to 19 in 2021 when I stepped down as a Chair.
 - Created the first ever three UNO core facilities which serve as service centers: the Machining and Prototyping Core, the Quantitative Analysis Core, and the Movement Analysis Core, which are all part of the MOVCENTR. These are also unique Cores for the state of Nebraska.
 - The UNO Department of Biomechanics accounts consistently for one third of the indirect costs of UNO.
 - A 2022 economic evaluation of the Department of Biomechanics showed the following: As a result, the department has had a total impact of \$27.54 million on the Omaha metropolitan economy. The first impact assessment for this department was done in 2019. The data available was through 2015 and the department was still quite new. The total impact then was \$1.42 million. Clearly, the department has experienced substantial growth. In conclusion, substantial growth and continued success in graduate placements have accelerated the department’s impact on the Omaha economy. It is generally

accepted that universities are engines of growth for an economy. Universities are sums of departments. The fact that this department contributes to the local economy has an impact is not surprising. However, the growth and magnitude of the impact is quite impressive. The benefits Omaha realized in terms of new spending supporting new business growth and job creation are substantial.”

- **EXCELLENCE IN RESEARCH AND CREATIVE ACTIVITY:** In its 2014 report of the Biomedical Technology capabilities in Nebraska, Stanford Research Institute (SRI) stated that “The University of Nebraska Omaha is home to world class research in biomechanics.” Furthermore, UNO Biomechanics was ranked as No. 7 (tied with Northwestern University and University of Pittsburgh) in biomechanics research in the USA. This was the highest ranking achieved by any other biomedical technology field across UNO, UNMC, and UNL.
 - Received in 2014 the largest research grant in the history of UNO (P20 through the NIH; \$10+ million). Five years later, this grant was renewed, breaking this record. Received \$50+ million dollars in grants from NIH, NASA, NSF, the NIDRR/US Department of Education, and many other agencies and foundations.
 - Led the Division of Biomechanics and Research Development in the acquisition of a second NIH P20 COBRE grant (\$11+ million) in 2023 and an NSF E-RISE grant (8+ million). It is the only Department in the University of Nebraska system with three large federally funded center grants.
 - Published 296 peer-reviewed scientific journal articles, four textbooks, and 22 book chapters (H-index is 77 with 23,892 citations according to Google Scholar: 7/20/26).
 - Received the first NIH K25 award in the state of Nebraska.
 - Received the University of Nebraska system wide Innovation, Development and Engagement Award (IDEA) and the University of Nebraska system wide Outstanding Research and Creative Activity (ORCA) award. I am only the second faculty member in the history of the entire University of Nebraska system that has received both the ORCA and the IDEA award. I also received the UNO Outstanding Researcher of the Year Award.
 - Invited and given seminars and workshops all over the world (e.g., Australia, Portugal, Spain, Ireland, Germany, England, Switzerland, Austria, France, and others) as an expert in movement variability, nonlinear dynamics, and biomechanics.
- **EFFECTIVE FUNDRAISER:** Procured \$25 million exclusively from private donations for the Biomechanics Research Building; \$6 million for the original building, \$12 million six years later for its first expansion, and \$17 million six years later for its second expansion.
 - A named professorship was specifically created by a donor for me, the Distinguished Community Chair in Biomechanics.
 - Developed fellowships with a variety of private donors to support students in biomechanics.
 - Developed with private donations, the Biomechanics Reward & Retention Program Fund to reward faculty in Biomechanics for acquiring large federal grants.
 - Developed with personal funds, the Vaya Stergiou Fellowship that is given annually to a student who major in Biomechanics, in honor of my mother.
 - Procured six donations in equipment from international companies to jumpstart the creation of a Biomechanics Laboratory in the Aristotle University of Thessaloniki.
- **ACADEMIC EXCELLENCE:** Only UNO faculty to serve on the University of Nebraska Medical Center Graduate Council and as a Chair of a Graduate Program at the University of

Nebraska Medical Center. Held a paid faculty appointment at the College of Public Health for more than 10 years and adjunct faculty appointments in various Departments at the University of Nebraska Medical Center, the University of Nebraska Omaha, and the University of Nebraska Lincoln.

- Led the development of the doctoral program in Exercise Science at UNO in 2012, which was the first and only approved standalone doctoral program at my university at that time. Organized the program and developed the curriculum as the first Chair of its Doctoral Program Committee. This program is now called Biomechanics and Kinesiology doctoral program.
- Developed new 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.
- Graduated the first doctoral student from the University of Nebraska Lincoln Biomedical Engineering PhD program.
- Led the development of a Bachelor of Science degree in Biomechanics which was only one of three in USA when started. Created a Master of Science degree in Biomechanics with the inaugural semester starting with 20 declared students.
- Led the development of a dual Master of Science degree in Biomechanics between the University of Nebraska at Omaha and the Aristotle University of Thessaloniki Greece.
- **STUDENT CENTERED:** Supervised 42 doctoral dissertations, 49 master's theses, and 17 post-doctoral fellows.
 - Received the UNO Outstanding Teacher of the Year Award, the UNO Outstanding Graduate Mentor Award, and, as the Director of Nebraska Biomechanics Core Facility, the Chancellor's Academic Excellence Award.
 - Mentored the first post-doc that received an NIH K99/R00 awardee in the state of Nebraska.
 - Mentored the first doctoral student that received an NIH F31 award in my university.
 - Supported the development of Biomechanics United, a student organization for UNO Biomechanics students, and, as the 2020-2021 President of the American Society of Biomechanics, initiated the development of Student Chapters across the USA.
 - Developed a service requirement for all UNO students in Biomechanics that involves community engagement.
 - Supported and fostered the development of the Advanced Manufacturing for 3D printed prostheses for children with disabilities initiative and the Nebraska Center for 3D Innovation which is an NSF Research Infrastructure Improvement Program under the EPSCoR Research Incubators for STEM Excellence.
- **INTERNATIONAL, NATIONAL, AND LOCAL COMMUNITY ENGAGEMENT:** Received the UNO Chancellor's Medal in recognition for extraordinary service by exemplifying and sustaining excellence in his field. Received the University of Nebraska Innovation, Development and Engagement Award (IDEA) which recognizes faculty members who have extended their academic expertise beyond the boundaries of the university in ways that have enriched the broader community.
 - Named Fulbright Scholar twice (Portugal and Greece).
 - First person from Nebraska to be inducted into the National Academy of Kinesiology, and to be named a Fellow of the American Institute of Biological and Medical Engineers, the American Society of Biomechanics, and the American Association for Advancement

in Science (AAAS). I am the first faculty in my university that became AAAS Fellow since 1945.

- Participate in grant reviewing for NSF, VA, DoD, and NIH study sections (many times as a chair of the study section) as well as for several different countries (e.g., Hong Kong, Denmark, France, Switzerland, Netherlands, Romania, and others).
- Developed the Annual Conference in Human Movement Variability and the Annual Great Plains Biomechanics Conference. Currently is running for 11 years.
- Hosted people from all over the world to work with me in Omaha for sabbaticals (e.g., Norway, Japan, Russia, Denmark, Iran, Greece, and many others).
- As a Chair of the Department of Biomechanics, dedicated departmental funds to hire the first community engagement coordinator who organized every year activities all over the state.
- As a Chair of the Department of Biomechanics, developed partnerships between Biomechanics and the Omaha Public Schools, Latino communities, Native American communities, the Omaha Zoo, and many others.
- Brought the American Society of Biomechanics' annual meeting to Omaha in 2013. This was the first large scale scientific meeting to take place in Omaha and in our downtown convention center.
- Held appointments and maintained collaborations with laboratories across the United States and the rest of the world.
- Hosted scientists and clinicians from all over the world that attended the Nonlinear Analysis Workshop that I developed and organized every year in Omaha for more than 20 years (e.g., Spain, Portugal, Canada, Germany, England, Australia, Japan, and many others).

NAMED PROFESSORSHIPS (N = 2)

1. Distinguished Community Research Chair in Biomechanics, University of Nebraska Omaha, 2014-present.
2. Isaacson Chair for Research, Teaching and Creativity, University of Nebraska Omaha, 2005-2014.

HONORS AND AWARDS (N = 19)

1. American Association for the Advancement of Science (AAAS), Inducted Fellow, 2025.
2. Circle of Distinction Medallion, University of Nebraska Omaha, 2022.
3. Research Innovation Award for the Licensed Technology: COPD Detection Platform, University of Nebraska Medical Center, 2021.
4. Best Paper Award for 18th IEEE Annual Consumer Communications & Networking Conference, 2021.
5. Outstanding Research and Creative Activity Award (ORCA) University of Nebraska, 2021.
6. UNEMED Innovator of the Year Department of Biomechanics, 2018.
7. Innovation, Development and Engagement Award (IDEA) University of Nebraska, 2018.
8. Chancellor's Medal for the May 2017 Commencement, University of Nebraska Omaha, 2017.
9. Journal of Motor Learning and Development Excellence (JMLD) in Research Award, 2017.
10. American Institute for Medical and Biological Engineering (AIMBE), Inducted Fellow, 2017.
11. Fulbright Scholar, Greece, 2017.
12. American Society of Biomechanics, Inducted Fellow, 2017.
13. Fulbright Scholar, Portugal, 2016.
14. National Academy of Kinesiology, Inducted Member #510, 2011.
15. Chancellor's Strategic Planning Award for Academic Excellence, University of Nebraska Omaha, 2010.
16. European Workshop on Movement Science, Distinguished Scientist Lecturer, 2009.
17. Outstanding Research or Creative Activity Award, University of Nebraska Omaha, 2008.
18. Outstanding Graduate Mentor Award, University of Nebraska Omaha, 2006.
19. Outstanding Teaching Award, University of Nebraska Omaha, 2004.

VISITING AND INVITED PROFESSORSHIPS/SCHOLARSHIPS (N = 41)

1. Fall 2025, University of Porto, Porto, Portugal.
2. Fall 2025, University of Innsbruck, Innsbruck, Austria.
3. Summer 2025, University of Caen Normandie, Caen, France.
4. Spring 2025, University of Evora, Evora, Portugal.
5. Spring 2023, University of Hamburg, Hamburg, Germany.

6. Summer 2023, ETH Zurich, Zurich, Switzerland.
7. Summer 2023, Egas Moniz University, Almada, Portugal.
8. Fall 2023, Vrije Universiteit Brussel, Brussels, Belgium.
9. Fall 2023, University of Catania, Catania, Italy.
10. Fall 2022, Politecnico de Leiria, Leiria, Portugal.
11. Fall 2022, Institute of Sports Science, Darmstadt University of Technology, Darmstadt, Germany.
12. Fall 2022, NOVA Medical School, Lisbon, Portugal.
13. Fall 2022, Department of Sport and Health, University of Evora, Evora, Portugal.
14. Fall 2022, Politencico de Santarem, Escola Superior de Desporto de Rio Maior, Rio Maior, Portugal.
15. Winter 2020, University of North Carolina Greensboro, North Carolina, USA.
16. Fall 2019, School of Theology, Aristotle University, Thessaloniki, Greece.
17. Fall 2019, Department of Physiology, University of Patras, Patras, Greece.
18. Spring 2019, Technological Educational Institute of Western Macedonia, Kastoria, Greece.
19. Spring 2019, Technical University of Darmstadt, Darmstadt, Germany.
20. Spring 2019, The University of Newcastle, Newcastle, Australia.
21. Fall 2018, Humboldt University of Berlin, Berlin, Germany.
22. Summer 2018, EuroMov, Université de Montpellier, Montpellier, France.
23. Fall 2017, Department of Physical Education & Sport Science, Aristotle University, Thessaloniki, Greece (Fulbright).
24. Fall 2017, Department of Physical Education & Sport Science, Democritus University, Komotini, Greece.
25. Fall 2017, Department of Mechanical Engineering and Aeronautics, University of Patras, Patras, Greece.
26. Summer 2017, University of Lisbon, Portugal.
27. Summer 2017, Université catholique de Louvain, Belgium.
28. Spring 2017, Vrije Universiteit Amsterdam, Holland.
29. Spring 2017, King's College London, United Kingdom.
30. Spring 2016, University of Castello Branco, Portugal (Fulbright).
31. Spring 2016, University of Extremadura, Spain.
32. Summer 2015, Brunel University London, United Kingdom.
33. Spring 2015, Palacký University of Olomouc, Czech Republic.
34. Spring 2014, University of Florida, USA.
35. Spring 2013, University College Dublin, Ireland.
36. Spring 2013, Interdisciplinary College of Germany in Gunne at Lake Mohne, Germany.
37. Spring 2012, University of Pablo de Olavide, Sevilla, Spain.
38. Spring 2011, University of Technology of Sydney, Australian Institute of Sport at Canberra and Victorian Institute of Sport at Melbourne, Australia.
39. Summer 2009, University of Lisbon, Lisbon, Portugal.

40. Spring 2007, Instituto de Biomecánica de Valencia, Valencia, Spain.
41. Spring 2005, University of Ioannina Medical Center, Ioannina, Greece.

OTHER AWARDS, HONORS, AND SIGNIFICANT SERVICE POSITIONS (N = 28)

1. University of Nebraska Medical Center, Administrative Mentoring Committee for the Cognitive Neuroscience of Development & Aging Center, Member, 2025-present
2. American Institute of Biological and Medical Engineering Awards Committee, Member, 2024-present
3. American Society of Biomechanics, Development Committee, Member, 2023-2025.
4. American Institute of Biological and Medical Engineering International A Review Committee, Member, 2022-2023.
5. American Society of Biomechanics, Past-President and Member of the Executive Board, 2021-2022.
6. American Society of Biomechanics, President and Chair of the Executive Board, 2020-2021
7. American Society of Biomechanics, President-Elect and Member of the Executive Board, 2019-2020
8. University of Nebraska at Omaha, UNO Chancellor Gold's Investiture, Marshall, 2019.
9. Creighton University, Administrative Advisory Committee (AAC) for the Translational Hearing Center, Member, 2021 – Present.
10. Boys Town National Research Hospital, Administrative Advisory Committee (AAC) for the Phase II of the COBRE Center for Perception and Communication in Children, Member, 2019 – Present.
11. Movement Academy, Technical University of Darmstadt, Member of the Coordination Committee, 2019 - present.
12. The 9th Olympiad of The Mind, The International S.T.E.P.S. Foundation, Invited Participant, Sept 2017.
13. US Department of Veterans Affairs, Rehabilitation Research and Development Service (RR&D) Aging & Neurodegenerative Diseases panel, Chair, 2014-2017.
14. Delaware ACCEL-CTR, External Advisory Committee Member, 2014-2024.
15. 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.
16. American Society of Biomechanics, Annual Meeting Chair, 2013.
17. American Society of Biomechanics, Education Chair, 2007-2010.
18. Creighton University, Professor Courtesy Appointment Dept. of Physical Therapy, 2006-present.
19. National Institutes of Health, Mentored Quantitative Research Development Award, 2005.

20. University of Nebraska Medical Center, Professor Courtesy Appointment Dept. of Pediatrics, 2005.
21. University of Nebraska Medical Center, Professor Courtesy Appointment Dept. of Surgery, 2005.
22. University of Nebraska Omaha, Professor Courtesy Appointment Psychology Dept, 2001.
23. University of Nebraska, Faculty Fellow Award, 1999.
24. Golden Key National Honor Society, Honorary Member, 1998.
25. Graduate Teaching Fellowship, University of Oregon, 1991 - 1995.
26. University of Nebraska at Omaha Physical Education Outstanding Graduate Student, 1991.
27. University of Nebraska at Omaha, Graduate Assistantship, 1989 - 1991.
28. 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, Computer in Biology and Medicine.

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, NSF DARE CAREER Virtual Panel, NSF Engineering Biology and Health (EBH) Major Research Instrumentation (MRI) Panel A.

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: Health and Medical Research Fund (HMRF) for the Food and Health Bureau of Hong Kong SAR Government, Danish foundation TrygFonden, 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, Dutch Research Council - Domain Applied and Engineering Sciences (AES).

Journal Reviewer:

Science Translational Medicine, 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, 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, Somatosensory & Motor Research, Ophthalmology.

GRANTS AND CONTRACTS

RESEARCH RELATED GRANTS (N = 69)

- 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 Positional 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) 37th 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 COBRE Phase 1, \$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) Assessing the relationship between visual field defect and driving performance in glaucoma. Grantor: UNMC CTR Pilot, 2017-2018, \$8,248, Role: UNO-PI.
- 53) 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.

- 54) Cerebral microhemorrhages and gait dysfunction in aging. Grantor: NIH, 1R01AG055395-01, 2017-2022, \$303,400, Role: Consultant.
- 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. Grantor: Zoll Medical Corporation, 2018-2019, \$75,466, Role: PI
- 57) Driving Performance and Safety in Rheumatoid Arthritis. Grantor: UNMC, 2018-2019, \$13,578, Role: UNO-PI.
- 58) Mechanisms of Fall Resistance to Diverse Slipping Conditions. Grantor: National Institutes of Health and National Institute of Aging, R15AG063106, 2019-2021, \$420,108, Role: Co-Investigator - 0.24 calendar person months
- 59) A Novel Task to Decrease Step Width Variability in Older Adults. Grantor: UN Collaborative Initiative, 2019-2021, \$273,981, Role: PI
- 60) The influence of 3D printed prostheses on neural activation patterns of the primary motor cortex in children with unilateral congenital upper-limb reductions. Grantor: National Institutes of Health and National Institute of Neurological Disorders and Stroke, R01NS114282, 2019-2023, \$1,584,008.00, Role: Co-Investigator - 0.5 calendar person months
- 61) Harnessing Movement Variability to Treat and Prevent Motor Related Disorder. National Institutes of Health and National Institute of General Medical Sciences, P20GM109090 COBRE PHASE 2, 2019-2024, \$10,990,584.00, Role: PI
- 62) Gaitprints as Predictors of Disease and Disability for Effective Rehabilitation Engineering, National Science Foundation CBET, 2021-2024, \$446,711.00, Role: PI
- 63) WatchID - Whole Body Analysis with Transformed Cross-modality Hierarchical Features for Biometric Identification, Intelligence Advanced Research Projects Activity (IARPA), 2021-2024, \$6,310,000.00, Role: Co-PI
- 64) Development and Testing of Recyclable Antimicrobial Materials for In-Space Manufacturing of Medical Devices, NASA EPSCoR, 2021-2024, \$1,125,000.00, Role: Co-Investigator - 0.08 calendar person months.
- 65) Augmented Reality for Avatar-Based Metronomes to Improve Human Movement, UN rCollaborative Initiative, 2021 – 2022, \$39,960.00, Role: Co-PI.
- 66) Harnessing walking variability to reduce falls in older adults, UN Collaborative Initiative, 2021 – 2023, \$149,570.00, Role: PI.
- 67) Biomarkers arising from nonlinear analysis of movement variability. Swiss National Science Foundation, 2023, \$16,380.86, Role: Co-PI.
- 68) Identification of pathology based on human walking, UN Collaborative Initiative, 2022 – 2024, \$39,981.00, Role: Co-I.
- 69) Harnessing Movement Variability to Treat and Prevent Motor Related Disorder, NIH NIGMS, P20GM109090 COBRE PHASE 3, 2025-2023, \$5,568,750.00, Role: PI.

TOTAL AMOUNT OF MONEY AWARDED FOR RESEARCH RELATED GRANTS: \$52,639,197

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 AT IOANNINA: €326,121.00

GRANTS WITH AUTH BIOMECHANICS ARISTOTLE UNIVERSITY OF THESSALONIKI - GREECE

- 1) Universities of Excellence, Greece 2.0, 2024, \$170,640.00, Role: PI

TOTAL AMOUNT OF MONEY AWARDED FOR RESEARCH AT THESSALONIKI: €170,640.00

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

INVENTIONS RELATED TO THE FIELD OF EXPERIENCE

PATENTS (N = 2)

1. Patent No. US 9,179,862 B2 “Method and system for assessing locomotive bio-rhythms”
Publication date: Nov 10, 2015.
2. US Patent App. 17/834,114, 202. “Systems and techniques for estimating the severity of chronic obstructive pulmonary disease in a patient.”

NEW INVENTIONS NOTIFICATIONS SUBMITTED (N = 13)

1. A Medical Device for the Evaluation of Sitting Postural in Infants with Motor Disabilities.
2. Pink Noise Driven Activity Monitor
3. System and Method for Identification of Brain Injury
4. System and Methods for Identifying and Measuring Individuals with Autism Spectrum Disorder
5. System and Method of Remote Diagnosis of Neurophysical Impairments
6. Gait Variability is altered in Older Adults When Listening to Auditory Stimuli with Differing Temporal Structures
7. Magnetically Silent Joystick for Rehabilitation of Neurological Disorder
8. Indifference to Chaotic Motion may be related to Social Disinterest in Children with Autism
9. Virtual Robot Assisted Minimally Invasive Training Simulator
10. Energy Capture Ankle Foot Orthosis
11. Neurosensory Organization Locomotor (NEurOL Testing System)
12. Method to Determine Subclinical Neurological Deficits in Hand Function
13. Pattern Analysis Using Lower Body Human Walking Data to Identify the Gaitprint

PUBLICATIONS

Summary

My publications have been cited 23892 times and H-index is 77 according to the Google Scholar database (<https://scholar.google.com/citations?user=n6B-sHUAAAAJ&hl=el&oi=ao>)

Ranked in the top 1% of the world-wide scientists both for a single year and career in the areas of Orthopedics, Neurology, Sports Sciences, and Clinical Medicine.

<https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/7>

According to Exaly (<https://exaly.com/author/7055232/nick-stergiou/rankings>), I am the 1st most cited author of the scientific journal Human Movement Science in 2011, the 1st most cited author of the scientific journal Annals of Biomedical Engineering in 2013, and I have the 2nd most cited paper in Human Movement Science for lifetime.

Books (4)

- 1) **Stergiou, N.** (2020). Biomechanics and Gait Analysis. Academic Press – Elsevier.
a. NOTE: Translated in Greek by Konstadaras Publishing Company (2023).
- 2) **Stergiou, N.** (2019). Advice for the Novice Investigator: Examples Taken from Movement Sciences. CRC Press, Taylor & Francis Group.
- 3) **Stergiou N.** (2017). Nonlinear Analysis for Human Movement Variability. CRC Press, Taylor & Francis Group.
- 4) **Stergiou N.** (2004). Innovative Analyses of Human Movement. Champaign, IL: Human Kinetics Publishers.

Book Chapters (N = 22)

- 1) Wiles TM, Likens AD, **Stergiou N.** (2026). Biomechanics. In: Introduction to Exercise Science (6th ed). Taylor and Francis.
- 2) **Stergiou N.** (2020). Introduction to Biomechanics. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 1-16). London, UK: Elsevier.
- 3) Likens AD, **Stergiou N.** (2020). Basic Biomechanics. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 17-64). London, UK: Elsevier. In Press.
- 4) Bates BT, Dufek JS, **Stergiou N.** (2020). Advanced Biomechanics. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 65-80). London, UK: Elsevier.
- 5) Bates BT, Dufek JS, **Stergiou N.** (2020). Why and how we move: The Stickman story. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 81-98). London, UK: Elsevier.
- 6) Skiadopoulos A, **Stergiou N.** (2020). Power spectrum and filtering. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 99-148). London, UK: Elsevier.
- 7) Rowen DR, Likens AD, **Stergiou N.** (2020). Revisiting a classic: Muscles, Reflexes, and Locomotion by McMahon. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 149-224). London, UK: Elsevier.
- 8) Silva LM, **Stergiou N.** (2020). The basics of gait analysis. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 225-250). London, UK: Elsevier.
- 9) Cavanaugh JT, **Stergiou N.** (2020). Gait variability: a theoretical framework for gait analysis and biomechanics. In: N. Stergiou (Ed.), Biomechanics and Gait Analysis (pp. 251-286). London, UK: Elsevier.

- 10) Likens AD, **Stergiou N.** (2020). Coordination and control: A Dynamical Systems approach to the analysis of human gait. In: N. Stergiou (Ed.), *Biomechanics and Gait Analysis* (pp. 287-312). London, UK: Elsevier.
- 11) Likens AD, **Stergiou N.** (2020). A tutorial on fractal analysis of human movements. In: N. Stergiou (Ed.), *Biomechanics and Gait Analysis* (pp. 313-344). London, UK: Elsevier.
- 12) Zuniga JM, **Stergiou N.** (2020). Future directions in biomechanics: 3D printing. In: N. Stergiou (Ed.), *Biomechanics and Gait Analysis* (pp. 345-375). London, UK: Elsevier.
- 13) **Stergiou N.** (2019). Variability in Life Can Facilitate Learning to Live Together. Kelso JAS. (Ed.) *Learning to Live Together: Promoting Social Harmony*. Springer International Publishing. pp. 65-69.
- 14) **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. (5th edition). pp. 205-240.
- 15) **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.
- 16) 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.
- 17) **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. (1st edition) pp. 615-624.
- 18) **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. (3rd edition) pp. 207-231.
- 19) Blanke D, **Stergiou N.** (2003). Biomechanics. In: Housh TJ, Housh DJ, Johnson G. (Eds.) *Introduction to Exercise Science*. San Francisco, CA: Benjamin Cummings, (2nd edition) pp. 109-130.
- 20) Blanke D, **Stergiou N.** (2000). Biomechanics. In: Housh TJ, Housh DJ. (Eds) *Introduction to Exercise Science*. Boston, MA: Allyn & Bacon Publishers, pp. 98-121.
- 21) 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.
- 22) 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.

Peer Reviewed Published Journal Articles (N = 296)

- 1) Grigoriadis S, Mylonas V, Panoutsakopoulos V, **Stergiou N**, Nikodelis T. Aging Alters Force Control Regularity and Delays Adaptation to Isometric Force Perturbations. *J Mot Behav*. 2026 Jul 14:1-11.

- 2) Wiles TM, Kim SK, Brink KJ, **Stergiou N**, Likens AD. Sex related gait dynamics are moderated by age. *Gait Posture*. 2026 Jun 19;130:110262.
- 3) Shakerian N, Kim SK, Wiles TM, **Stergiou N**, Likens AD. Body mass index has consistent effects on the magnitude of gait variability while its effect on the temporal structure of gait variability is age-dependent. *Eur J Appl Physiol*. 2026 Jun 18.
- 4) Ouattas A, Dieën JV, Grabiner MD, Fisher AL, **Stergiou N**, Hunt NH. Early kinetic responses enhance biomechanical discrimination of falls and recoveries during sudden bilateral slips. *J Biomech*. 2026 May 29;205:113386.
- 5) Kim SK, Wiles TM, **Stergiou N**, Likens AD. Rethinking the Defaults: Exploring Sample Entropy Parameters for Human Movement Data. *Ann Biomed Eng*. 2026 Apr 7.
- 6) Mangalam M, **Stergiou N**. Response to "Comments on 'The equilibrium point hypothesis revisited: why threshold control does not explain human movement'". *Exp Brain Res*. 2026 Mar 22;244(4):77.
- 7) Mylonas V, Wiles TM, Kim SK, **Stergiou N**, Likens AD. Hurst-Kolmogorov Process is a More Reliable and Statistically Powerful Alternative to Detrended Fluctuation Analysis for Estimating Hurst in Short Walking Trials. *Ann Biomed Eng*. 2026 Jun;54(6):1844-1858.
- 8) Mangalam M, **Stergiou N**. The equilibrium point hypothesis revisited: why threshold control does not explain human movement. *Exp Brain Res*. 2026 Feb 13;244(3):44.
- 9) Chalitsios C, Mylonas V, **Stergiou N**, Nikodelis T. Stride-to-Stride Fluctuations and Temporal Patterns of Muscle Activity Exhibit a Stronger Relationship in Running-Induced Fatigue. *Scand J Med Sci Sports*. 2026 Feb;36(2):e70223.
- 10) Wong AY, Charles AE, Mills C, **Stergiou N**, Likens AD. Human movement patterns predict task-unrelated thought. *PLoS One*. 2026 Jan 28;21(1):e0341902.
- 11) Chalitsios C, **Stergiou N**, Nikodelis T. Ground gradient affects stride-to-stride fluctuations and gait variability in overground walking. *Eur J Appl Physiol*. 2026 126, 259–267.
- 12) Sowalsky KL, Okun MS, Terza M, Lee H, McFarland N, **Stergiou N**, Almeida L, Hass CJ. Regular metronome, fractal metronome, and music for Parkinson gait: A Randomized Crossover Study. *JAMA Network Open*. 2026 Apr 1;9(4):e262744.
- 13) Chalitsios C, **Stergiou N**, Nikodelis T. Multifractality of stride-to-stride variations in adolescent runners is sensitive to endurance training. *Sports Biomech*. 2025 Dec;24(12):3675-3691.
- 14) Joveini G, Boozari S, Zareiyani A, Hejazi-Shirmard M, **Stergiou N**. Effectiveness of Upper Extremity Exoskeletons in Children with Cerebral Palsy Within International Classification of Functioning, Disability and Health Domains: A Systematic Review. *Child Care Health Dev*. 2025.
- 15) Kalaitzi Manifrenti M, Kent JA, Wickstrom J, **Stergiou N**, Likens AD. Pacing to pink noise enhances gait recovery from a mechanical perturbation. *J Exp Biol*. 2025 Oct 1;228(19):jeb250650.
- 16) Mylonas V, Blom PM, Panoutsakopoulos V, **Stergiou N**, Nikodelis T. Transfer of motor learning in a motion-controlled video game is better facilitated using rotations of the torso rather than movements of the center of pressure as a controller. *Hum Mov Sci*. 2025 Oct;103:103400. doi: 10.1016/j.humov.2025.103400.
- 17) Wiles TM, Kim SK, Manifrenti MK, Brink KJ, Grunkemeyer A, **Stergiou N**, Likens AD. NONAN GaitPrint: An IMU gait database of healthy middle-aged adults. *Sci Data*. 2025 Sep 30;12(1):1603.
- 18) Mylonas V, Grigoriadis S, Metaxiotis D, Kellis E, **Stergiou N**, Nikodelis T. Medial parapatellar surgical approach leads to greater loss of postural sway complexity compared to mid-vastus

- approach in women undergoing total knee arthroplasty. *Knee Surg Sports Traumatol Arthrosc.* 2025 Sep 9. doi: 10.1002/ksa.70057.
- 19) Ouattas A, Walski A, Mun S, Rasmussen CM, **Stergiou N**, Hunt NH. Higher fall rates and broader kinematic diversity in bilateral versus unilateral unconstrained slips. *PLoS One.* 2025 Aug 7;20(8):e0328900. doi: 10.1371/journal.pone.0328900.
 - 20) Mangalam M, Kelty-Stephen D, Barfi M, Deligiannis T, Schlattmann B, Likens A, Kiyono K, **Stergiou N**. Ageing alters postural sway responsivity to the centre of mass movement. *J R Soc Interface.* 2025 Aug;22(229):20250220.
 - 21) Brink KJ, Wiles TM, **Stergiou N**, Likens AD. Higher entropy in movements may promote enhanced upper limb motor precision. *Hum Mov Sci.* 2025 Aug;102:103368.
 - 22) Mylonas V, Grigoriadis S, Chalitsios C, **Stergiou N**, Nikodelis T. Postural sway variability in young adults presents higher complexity during morning compared to evening hours while in older adults remains the same. *Exp Brain Res.* 2025 Jun 16;243(7):176.
 - 23) Wiles TM, Kim SK, Mangalam M, Sommerfeld JH, Brink KJ, Grunkemeyer A, Manifrenti MK, Charles AE, Shakerian N, Haghighatnejad M, Mastorakis S, **Stergiou N**, Likens AD. NONAN GaitPrint: An IMU gait database of healthy older adults. *Sci Data.* 2025 Jan 24;12(1):143.
 - 24) Wiles TM, Grunkemeyer A, **Stergiou N**, Likens AD. A systematic review of human odometry. *Psychol Res.* 2024 Nov 15;89(1):16.
 - 25) Brink KJ, Kim SK, Sommerfeld JH, Amazeen PG, **Stergiou N**, Likens AD. Pink noise promotes sooner state transitions during bimanual coordination. *Proc Natl Acad Sci U S A.* 2024 Jul 30;121(31):e2400687121.
 - 26) Kelty-Stephen DG, Kiyono K, **Stergiou N**, Mangalam M. (2024). Spatial variability and directional shifts in postural control in Parkinson's disease. *Clin Park Relat Disord.* Apr 7;10:100249.
 - 27) Faria A, Sousa T, Vaz JR, Gabriel R, Gama J, **Stergiou N**. (2024). Females Present Reduced Minimum Toe Clearance During Walking as Compared to Males in Active Older Adults. *J Gerontol A Biol Sci Med Sci.* 2024 Jul 1;79(7):glae109.
 - 28) Wiles TM, Kim SK, **Stergiou N**, Likens AD. (2024). Pattern analysis using lower body human walking data to identify the gaitprint. *Comput Struct Biotechnol J.* Apr 12;24:281-291.
 - 29) Mangalam M, Kelty-Stephen DG, Seleznev I, Popov A, Likens AD, Kiyono K, **Stergiou N**. (2024). Older adults and individuals with Parkinson's disease control posture along suborthogonal directions that deviate from the traditional anteroposterior and mediolateral directions. *Sci Rep.* Feb 19;14(1):4117.
 - 30) Vaz JR, Cortes N, Gomes JS, Jordão S, **Stergiou N**. (2024). Stride-to-stride fluctuations and temporal patterns of muscle activity exhibit similar responses during walking to variable visual cues. *J Biomech.* Feb;164:111972.
 - 31) Vaz JR, Cortes N, Gomes JS, Reis JF, **Stergiou N**. (2024). Stride-to-stride variability is altered when running to isochronous visual cueing but remains unaltered with fractal cueing. *Sports Biomech.* Jan 2:1-13.
 - 32) Brink KJ, Likens AD, **Stergiou N**. (2024). The evolution of scholarship of Biomechanics and Motor Control within the Academy: the Past, the Present, and the Future. *Kinesiology Review.* 13(1): 42-54.
 - 33) Hinton EH, Buffum R, Kingston D, **Stergiou N**, Kesar T, Bierner S, Knarr BA. (2024). Real-Time Visual Kinematic Feedback During Overground Walking Improves Gait Biomechanics in Individuals Post-Stroke. *Ann Biomed Eng.* Feb;52(2):355-363.

- 34) Wilson TJ, Mangalam M, **Stergiou N**, Likens AD. (2023). Multifractality in stride-to-stride variations reveals that walking involves more movement tuning and adjusting than running. *Front Netw Physiol*. Oct 19;3:1294545.
- 35) Jordão S, **Stergiou N**, Brandão R, Pezarat-Correia P, Oliveira R, Cortes N, Vaz JR. (2023). Muscle activity variability patterns and stride to stride fluctuations of older adults are positively correlated during walking. *Sci Rep*. Nov 25;13(1):20721.
- 36) Wiles TM, Mangalam M, Sommerfeld JH, Kim SK, Brink KJ, Charles AE, Grunkemeyer A, Kalaitzi Manifrenti M, Mastorakis S, **Stergiou N**, Likens AD. (2023). NONAN GaitPrint: An IMU gait database of healthy young adults. *Sci Data*. Dec 5;10(1):867.
- 37) Wijesooriya P, Farjad SM, **Stergiou N**, Mastorakis S. (2023). Investigating the characteristics and performance of augmented reality applications on head-mounted displays: A study of the hololens application store. *IEEE International Conference on Communications Workshops*. 1445-1450.
- 38) Mangalam M, Kelty-Stephen DG, Sommerfeld JH, **Stergiou N**, Likens AD. (2023). Temporal organization of stride-to-stride variations contradicts predictive models for sensorimotor control of footfalls during walking. *PLoS One*. Aug 24;18(8):e0290324.
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- 276) **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.
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- 283) 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.
- 284) 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.
- 285) **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.
- 286) 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.

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- 290) **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.
- 291) Hreljac A, **Stergiou N.** (2000). Phase determination during normal running using kinematic data. *Medical and Biological Engineering and Computing*. Sep;38(5):503-506.
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Other (N = 11)

- 1) Mastorakis, S., Skiadopoulos, A., Likens, A., Shannigrahi, S., Nour, B., **Stergiou, N.** (2021). Networking and Computing in Biomechanical Research: Challenges and Directions. *IEEE Communications Magazine*.
- 2) Al Azad, M. W., Shannigrahi, S., **Stergiou, N.**, Ortega, F., Mastorakis, S. (2021). CLEDGE: A Hybrid Cloud-Edge Computing Framework over Information Centric Networking. *IEEE Conference on Local Computer Networks (LCN)*.
- 3) **Stergiou N.** (2020). Biomechanics Research: Variation in Human Movement. *Neurodiem*, Jan 8. <https://www.neurodiem.com/news/biomechanics-research-variation-in-human-movement-4u7spgEW85jfQJIHOyZrhQ>
- 4) 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*, April 16. <http://www.aopanet.org/publications/op-news/> Page 18-25.
- 5) 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>
- 6) Kurz MJ, **Stergiou N**, Giakas G, Georgoulis AD, Papageorgiou CD. (2002). Gait analysis in sports medicine. *ESSKA 2000 Newsletter*, 10:5-6.
- 7) Kurz MJ, **Stergiou N.** (1997). The need for speed. *Strategies*, 11:7-9.

- 8) **Stergiou N.** (2000). Archimedes: An Early Biomechanist. American Society of Biomechanics Newsletter, 13(2):8-9.
- 9) **Stergiou N.** (1995). Science and the sport shoe. The Sports of the North, 4226:2.
- 10) **Stergiou N.** (1994). Biomechanics of the Sport Shoe. Sport & Wellness, 1:6-7.
- 11) **Stergiou N.** (2002 – Present). University of Nebraska Omaha Biomechanics Newsletter.

ADVISING AND TEACHING ACTIVITY

COMPLETED DOCTORAL DISSERTATIONS (N = 42)

- 1) Tyler Wiles. Through the Biomechanics and Kinesiology Program at UNO. Establishing Age-Related Changes in Gait Dynamics, Human Movement Variability, and Person Identification. (Co-CHAIR, Completed Spring 2025).
- 2) Anaëlle Charles. Through the Biomechanics and Kinesiology Program at UNO. *Structured gait patterns promote efficient and adaptive locomotion*. (MEMBER, Completed Fall 2024).
- 3) Sofia Mendes Alves Pereira Jordão dos Santos. Through the University of Lisbon. *The effects of a fractal-based gait intervention in older adults' gait complexity*. (MEMBER, Completed Fall 2023)
- 4) Abderrahman Ouattas. Through the Biomechanics and Kinesiology Program at UNO. *Unconstrained Unilateral or Bilateral Slips: Biomechanical and Motor Coordination Differences Between Falls and Recoveries and The Contribution of Somatosensation*. (MEMBER, Completed Fall 2022)
- 5) Louis Hognon. Through the University of Montpellier, France. *L'adaptabilité comme nouveau concept de santé évaluée à travers les approches de systèmes complexes dans le contexte des personnes atteintes de maladies chroniques*. (MEMBER, Completed Fall 2022)
- 6) Sheridan Parker. Through the Biomechanics and Kinesiology Program at UNO. *Impact of virtual reality use on motor cortex and neuromuscular outcomes in stroke* (MEMBER, Completed Spring 2023)
- 7) Erica Hinton. Through the Biomechanics and Kinesiology Program at UNO. *The impact of real-time visual biofeedback on overground walking speed in individuals post-stroke*. (MEMBER, Completed Fall 2022)
- 8) Deepak Ravi. Through the Department of Health Sciences and Technology (D-HEST), ETH Zurich. *Benchmarking human locomotor adaptation in time and magnitude: from perturbations to recovery*. (MEMBER, Completed Fall 2021)
- 9) Prokopios Antonellis. Through the Exercise Science Program at UNO. *Simplified assistance of human locomotion at the center of mass*. (MEMBER, Completed Spring 2020)
- 10) 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)
- 11) Haris Sotirakis. Through the University of Thessaloniki, Greece. *The role of complexity of the environment in learning sensorymotor skills as related with age*. (MEMBER, Completed Spring 2020)
- 12) Elias Spiropoulos. Through the University of Patras, Patras, Greece. *An investigation on the accumulation of muscle fatigue on the lower back and upper extremities during the execution of a repetitive work*. (MEMBER, Completed May 2019)
- 13) 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, Completed May 2019)

- 14) Zainy Al Murad. Through the University of Montpellier, France. *Complexity matching processes during the coupling of biological systems: Application to rehabilitation in elderly* (EXAMINER, Completed May 2019)
- 15) 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)
- 16) Troy Rand. Through the Exercise Science Program at UNO. *The Effect of Multisensory Perturbations on Postural Control.* (MEMBER, Completed August 2018)
- 17) 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)
- 18) Thibault Warlop. Through the Médecine Physique et Réadaptation of the Cliniques Universitaires Saint-Luc of the Université catholique de Louvain, Belgium. *Can long-range autocorrelations be a clinical tool for assessing dynamic stability?* (MEMBER, Completed June 2017)
- 19) 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)
- 20) Andreas Skiadopoulos. Through the University of Extremadura, Spain. *Biomechanical analysis and characterization of the muscular intervention and control motor quality in the context of manual material handling.* (MEMBER, Completed January 2016)
- 21) Matthew Heesch. Through the Exercise Science Program at UNO. *Transcriptional and post-translational control of PGC-1 α following exercise in a hot environment.* (MEMBER, Completed November 2015)
- 22) 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)
- 23) 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)
- 24) 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)
- 25) 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)
- 26) Joshua Haworth. Through Environmental, Agricultural, and Occupational Health, and Toxicology program at UNMC. *Perception and production of complex movement variability.* (CHAIRMAN, Completed July 2013)
- 27) Jennifer Yentes. Through Medical Science Interdepartmental Area at UNMC. *Walking and breathing coupling in patients with chronic obstructive pulmonary disease.* (CHAIRMAN, Completed June 2013)
- 28) Bernadette Brown-Clerk. Through Industrial Engineering Department at UNL. *Evaluation and safety improvement of single-site surgery through simulation.* (MEMBER, Complete May 2012)
- 29) Dimitrios Katsavelis. Through Medical Science Interdepartmental Area at UNMC. *The effect of virtual reality on human movement variability during walking* (CHAIRMAN, Completed July 2012)

- 30) 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)
- 31) Sara Myers. Through Medical Science Interdepartmental Area at UNMC. *The Effect of Aging and Vascular Occlusion on Gait Variability.* (CHAIRMAN, Completed June 2011)
- 32) Amit Sethi. Through the Occupational Therapy Department at the University of Florida. *Upper extremity variability analysis post-stroke: New dimensions.* (MEMBER, Completed Fall 2010)
- 33) 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)
- 34) Joan Deffeyes. Through UNL/UNO, Psychobiology. *Nonlinear dynamics of infant sitting postural control.* (CHAIRMAN, Completed Spring 2010)
- 35) 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* (CO-CHAIR, Completed Spring 2010)
- 36) 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)
- 37) 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)
- 38) Max Kurz. Through UNO Psychobiology. *Chaos in Gait.* (CHAIRMAN, Completed Spring 2006)
- 39) 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)
- 40) Timothy Judkins. Through UNL Biomedical Engineering. *Robotic surgery and training: Quantification of performance for evaluation and training.* (CHAIRMAN, Completed Fall 2006)
- 41) 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)
- 42) 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)

COMPLETED MASTERS THESES (N = 49)

- 1) M. Tziouref. Through Aristotle University of Thessaloniki Greece. *Investigating the Influence of Arm Swing Modulation on Whole-body Angular Momentum and Temporal Structure of Gait Variability* (CHAIR)

- 2) M. E. Kalaitzi Manifrenti. Through UNO Biomechanics. Incorporating human movement variability in bimanual multifrequency coordination. (MEMBER)
- 3) V. Mylonas. Through Aristotle University of Thessaloniki Greece. Transfer of learning is possible between motion-controlled video games based on postural control. (CHAIR)
- 4) T. Wilson. Through UNO Biomechanics. Surface and tasks effects on fractal characteristics in gait. (MEMBER)
- 5) K. Brink. Through UNO Biomechanics. Do Irregular Metronomes Alter Bimanual Movement Coordination Dynamics? (MEMBER)
- 6) P. Orfanos. Through University of Patras of Patras Greece. Study on the variability of walking and development of an optimal training paradigm. (MEMBER)
- 7) P. Hatzinikolaou. Through Aristotle University of Thessaloniki Greece. The Variability of the Cardiac and Movement Rhythms in Older Adults. (MEMBER)
- 8) D. Rowen. Through UNO Biomechanics. Cortical activity during walking with variable metronomes. (CHAIR)
- 9) J. Sommerfeld. Through UNO Biomechanics. Isolating aspects of gait through the use of pacing signals. (CHAIR)
- 10) M. Walinski-Peterson. Through UNO Geography and Geology. Looking at God through Green-Colored Classes: Supernatural Space and the Place of Animals in Orthodox Christian Iconography. (MEMBER)
- 11) A. Kruse. Through UNO Mathematics. Impact of health practices on the spread of viruses: a Boolean network approach. (MEMBER)
- 12) N. Reynolds. Through UNO Biomechanics. Influence of fatigue on the reliability of gait variability measures. (MEMBER, Completed May 2018)
- 13) 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)
- 14) Ann Hausman. Through UNO Mathematics. The Spread of the Common Cold; a Boolean Network Approach. (MEMBER, Completed July 2017)
- 15) Haris Sotirakis. Through Aristotle University of Thessaloniki Greece. *Aging effects on postural tracking of complex visual motion cues*. (MEMBER, Completed October 2015)
- 16) Michaela Spenceri. Neuromuscular Consequences of Knee Osteoarthritis. (MEMBER, Completed May 2015)
- 17) Ryan Hasenkamp. *Investigation of muscular strength in peripheral arterial disease*. (MEMBER, Completed April 2014)
- 18) Amanda Ludes. Through UNO Mathematics. *Modeling the sensitivity of Boolean networks*. (Member, Completed April 2014.)
- 19) Kayser Jansen. Through UNO Mathematics. *Phase transitions of Boolean networks with partially nested canalizing functions*. (MEMBER, Completed December 2012.)
- 20) David Arpin. *Motor control of the lower extremity musculature in children with Cerebral Palsy*. (MEMBER, Completed May 2012.)
- 21) Nathaniel Hunt. *Manipulating gait variability with Für Elise: Chaotic and fractal variations on a theme*. (CHAIRMAN, Completed July 2012.)
- 22) Elizabeth Ball. Through UNO Mathematics. *Dynamic spread of social behavior in Boolean networks*. (MEMBER, Completed May 2011.)
- 23) Elena Kokkonis. *The effects of altered somatosensory information on sitting posture in infants* (CHAIRMAN, Completed July 2011.)

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

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

COMPLETED UNDERGRADUATE THESES (N = 2)

- 1) Neil Huben. *The effect of Masai Barefoot Technology (rocker bottom) shoes on joint kinematics and kinetics.* (CHAIRMAN, Completed May 2011)
- 2) Charles I. Sloan. *Vibration in Transtibial Amputees.* (CHAIRMAN, Completed May 2020).

POST DOCTORAL FELLOWS SUPERVISED (N = 17)

- | | |
|-----------------|-------------------------------|
| 1. 2006 - 2009 | Joseph Ka-Chun Siu, Ph.D. |
| 2. 2006 - 2011 | Leslie Decker, Ph.D. |
| 3. 2007 - 2012 | Mukul Mukherjee, Ph.D. |
| 4. 2009 - 2010 | Shi-yun Park, Ph.D. |
| 5. 2009 - 2011 | Fabien Cignetti, Ph.D. |
| 6. 2010 - 2012 | Srikant Vallabhajosula, Ph.D. |
| 7. 2011 - 2012 | Denise McGrath, Ph.D. |
| 8. 2012 - 2014 | Mu Qiao, Ph.D. |
| 9. 2011 - 2013 | Yawen Yu, Ph.D. |
| 10. 2012 - 2014 | Anastasia Kyvelidou, Ph.D. |
| 11. 2013 - 2016 | Steven Harrison, PhD. |
| 12. 2013 - 2015 | DJ Eikema, Ph.D. |
| 13. 2016 - 2020 | Amelia Lanier, Ph.D. |
| 14. 2017 - 2018 | Joao Vaz, Ph.D. |
| 15. 2018 - 2019 | Luis Silva, Ph.D. |
| 16. 2018 - 2020 | Aaron Likens, Ph.D. |
| 17. 2017 - 2021 | Andreas Skiadopoulos, Ph.D. |

COURSES TAUGHT (N = 18): Courses not taught at UNO are identified. All courses have been taught more than once and several of them for many years.

- 1) BMKI 9000 Grant Writing for the Biomedical Sciences (currently teaching). Starting in the Fall of 2018, this course is taught exclusively online and is now attended by students and interested faculty from all over the world.

- 2) BMKI 9010 Principles and Practice of Biomedical Research (currently teaching). Starting in the Spring of 2019, this course is taught exclusively online and is now attended by students and interested faculty from all over the world.
- 3) Undergraduate Biomechanics (currently teaching). This course is taught in Greek for Aristotle University in Thessaloniki Greece starting Fall 2023.
- 4) Graduate Biomechanics (currently teaching). This course is taught in Greek for Aristotle University in Thessaloniki Greece starting Fall 2023.
- 5) BMCH 8030/9031 Biostatistics I
- 6) APK 6225 Biomechanical Instrumentation (at the University of Florida Fall 2014)
- 7) PE 9401/8400 Motor Control I
- 8) PE 9100/8100 Nonlinear Analysis
- 9) PE 8400/9401 Motor Learning I
- 10) BMCH/PE 9910 Doctoral Seminar
- 11) PE 8410 Motor Control
- 12) PE 8040 Advanced Statistics
- 13) PE 4630 Biomechanics
- 14) PE 8400 Motor Learning and Control
- 15) PE 2880 Basic Anatomy and Physiology
- 16) PE 8450 Advanced Biomechanics
- 17) PE 4010/8016 Laboratory Methods in Exercise Science
- 18) HPER 8030 Research in HPER
- 19) PE 3840/8840 Microcomputer Applications in HPER
- 20) EMS 4310 Programming in QBasic (at the University of Oregon Winter 1992-1995)

SERVICE

PROFESSION COMMITTEE WORK

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

1. Biomedical Engineering Doctoral Program Admissions Committee
Fall 2003 – 2020 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 – Spring 2022 Role: Member Selection Process: Appointed

University of Nebraska Omaha (UNO) (N = 18)

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 – Spring 2015	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		
Fall 2017 – Spring 2018	Role: Member	Selection Process: Appointed
18. Federal Relation selection Committee		
Fall 2021 – Spring 2022	Role: Member	Selection Process: Appointed

UNO - College of Education, Health, and Human Sciences (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 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
2011-2019 Role: Member Selection Process: Appointed by the Governor
2. Nebraska Biomedical Engineering Working Group
2000– 2020 Role: Member Selection Process: Appointed
3. NASA Nebraska Space Grant and EPSCoR Technical Advisory Committee (TAC), Committee
2012 – 2020 Role: Member Selection Process: Appointed

Aristotle University of Thessaloniki (N = 1)

1. University Wide Research and Creative Activity Committee
2023-present Role: Member Selection Process: Appointed by the Dean

Presentations

International Invited Workshops (N = 18)

- 1) Portugal – University of Evora, Villa Vicoso, April 2025.
- 2) Switzerland - *ETH Zurich*, Zurich, July 2023.
- 3) Portugal - *Egas Moniz School of Health & Science*, Almada, June 2023.
- 4) Greece - *North Academy of Fitness*, Thessaloniki, April 2022
- 5) Portugal - *Politecnico de Leiria*, Leiria, November 2022
- 6) Australia – *University of Newcastle*, Newcastle, February 2019.
- 7) Greece – *Aristotle University*, Thessaloniki, November 2017.
- 8) Portugal – *University of Lisbon*, Lisbon, June 2017.
- 9) Portugal - *University of Castelo Branco*, Castelo Branco, April 2016.
- 10) England - *Brunel University*, London, June 2015.
- 11) Ireland - *University College Dublin*, Dublin, May 2013.
- 12) Germany - *Interdisciplinary College 2013*. Gunne at Lake Mohne, March 2013.
- 13) Spain - *University of Pablo de Olavide*. Sevilla, Spain, March 2012.
- 14) Australia - *University of Technology of Sydney*, *Australian Institute of Sport at Canberra* and *Victorian Institute of Sport at Melbourne*, Australia. February 2011.
- 15) Brazil - *Winter School of Biomechanics*. Sao Paolo, Brazil, July 2009; *13th Congress of the Brazilian Society of Biomechanics*. Sao Paolo, Brazil, July 2009.
- 16) Portugal - *European Workshop on Movement Science*. Lisbon, Portugal, June 2009.
- 17) Spain - *Instituto de Biomecánica de Valencia*, Valencia, Spain, November 2007.
- 18) Greece - *University of Ioannina Medical Center*, Thessaloniki, Greece, April 2005.

National Invited Workshops (N = 9)

- 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.
- 9) Nonlinear Analysis Workshop, week-long tutorial, University of Nebraska at Omaha, Omaha, Nebraska, USA (organized every August since 2008)

Keynotes and Invited Seminars (N = 127)

- 1) Harnessing Human Movement Variability for Health and Prevention, 2nd International Conference, Research Centre Health and Prevention across the Lifespan, University of Innsbruck, Innsbruck, Austria, October 23, 2025.
- 2) Understanding human movement variability through nonlinear dynamics, Biomechanics Days of FADEUP 2025, University of Porto, Porto, Portugal, September 25, 2025.
- 3) Innovative technologies to harness Variability in Movement, CIREVE Summer School, University of Caen Normandy, Caen, France, August 27, 2025.
- 4) Theoretical Foundations: Nonlinear Dynamics in Aging Systems, NEXAGE Symposium Course on Improving the Quality of Life of the Elderly: Theory and Practice, Vila Viçosa, Portugal, April 3, 2025.
- 5) Innovative analyses of human movement variability: Contributions to the field of biomechanics, University of Evora, Evora, Portugal, April 5, 2025.
- 6) Variability in Movement, Annual International Conference of the Society for Chaos Theory in Psychology & Life Sciences, Colorado Springs, Colorado, USA, July 30, 2025.
- 7) Innovative analyses of human movement variability: Contributions to the field of biomechanics, Department of Health and Exercise Science, Colorado State University, Fort Collins, Colorado, February 23, 2024.
- 8) I carve my unique path, Second High School of Mikra, Thessaloniki, Greece, April 25, 2024.
- 9) Human movement variability, nonlinear dynamics, and pathology: is there a connection?, KEDEA, Thessaloniki, Greece, April 13, 2024.
- 10) How a scientist approaches the Orthodox Faith, Holy Monastery of Saint Anastasia the Roman, Rethymno, Crete, Greece, April 1, 2023.
- 11) Innovative analyses of human movement variability: Contributions to the field of motor behavior, Department of Human Movement Science, University of Hamburg, Hamburg, Germany, April 4, 2023.
- 12) Innovative analyses of human movement variability: Contributions to the field of biomechanics, Physical Education and Physical Therapy Research Group, Vrije Universiteit Brussel, Brussels, Belgium, October 13, 2023.
- 13) Innovative analyses of human movement variability: Contributions to the field of biomechanics, Department of Biomedical and Biotechnological Sciences, School of Medicine, University of Catania, Catania, Italy, October 24, 2023.
- 14) Update on Biomechanics since the last time we met five years ago, UNO Alumni Golden Circle Lunch, Omaha, Nebraska, June 2, 2023.
- 15) The evolution of scholarship of Biomechanics and Motor Control within the Academy: The Past, the Present, and the Future, National Academy of Kinesiology Annual Meeting, Newport Beach, California, September 29, 2023.
- 16) Advanced Applications of Biomechanics Research at the University of Nebraska at Omaha, Institute of Sports Science, Darmstadt University of Technology, Darmstadt, Germany, October 10, 2022.
- 17) Examples of Novel Applications from the Department of Biomechanics of the University of Nebraska at Omaha, Department of Physical Education & Sport Science, Aristotle University of Thessaloniki, Thessaloniki, Greece, October 25, 2022.

- 18) From the Lab to World, Third Annual Summit of the Comprehensive Health Research Centre, NOVA Medical School, Lisbon, Portugal, November 3, 2022.
- 19) Strong Inference, Department of Sport and Health, University of Evora, Evora, Portugal, November 5, 2022.
- 20) Innovative analyses of human movement variability: Contributions to the field of motor behavior, Politencico de Santarem, Escola Superior de Desporto de Rio Maior, Rio Maior, Portugal, November 10, 2022.
- 21) Running or Walking: Current Trends in Sports Medicine, 11th International Congress of Sports Medicine in the 21st Century, Sports Medicine Laboratory Aristotle University and Hellenic College of Sports Medicine (Virtual), April 1, 2022.
- 22) Advanced Applications of Biomechanics Research in Omaha. Seminar for the Rehabilitation Medicine Department (RMD) Meeting, National Institutes of Health (Virtual), November 2021.
- 23) Biomechanics and Movement Variability to answer questions in Motor Development. Keynote for the Fifth Assembly of the International Motor Development Research Consortium (Virtual), September 2021.
- 24) Advanced Applications of Biomechanics Research in Medicine. Seminar for the UNMC's College of Medicine (COM) Annual Research Retreat (Virtual), October 2021.
- 25) Updates On Our Research in Movement Variability. Seminar for the UNO Department of Biomechanics Seminar Series (Virtual), August 2021.
- 26) New possibilities of growth of University Departments: Examples from the Department of Biomechanics of the University of Nebraska at Omaha. Keynote for the First Panhellenic Conference of Physical Education in Schools and Sports Science (Virtual), May 2021.
- 27) Examples of Innovation from the Department of Biomechanics of the University of Nebraska at Omaha. Keynote for the Sixth Symposium of Research and Innovation of the Metropolitan College of Thessaloniki (Virtual), May 2021.
- 28) Harnessing movement variability to treat and prevent motor related disorders. Seminar for the Hellenic Society of Physiology (Virtual), April 2021.
- 29) Variability in Human Movement. Keynote for the 8th International Conference on Sport Sciences Research and Technology Support (icSPORTS 2020) (Virtual), November 2020.
- 30) Advice for the Novice Investigator: Grant writing for the NIH and other agencies. Lecture for the ISMCO'20: 2nd International Symposium on Mathematical and Computational Oncology (Virtual), October 2020.
- 31) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Keynote for the Mid-South Biomechanics Conference, Memphis, Tennessee, February 2020.
- 32) Developing a World-Class STEM Research and Education Program at High Research Activity (R2) University. RISE Network Speaker, University of North Carolina Greensboro, February 2020.
- 33) Taking Biomechanics to the Next Level: Biomechanics Field of Dreams. Lecture for the University of Nebraska Foundation, Omaha, NE, October 2019.
- 34) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar for the Lauflabor Lecture Series, Institute of Sport Science and Centre for Cognitive Science, Technical University (TU) of Darmstadt, Darmstadt, Germany, March 2019.
- 35) Variability in Human Movement. Seminar for the Department Informatics Engineering, Technological Educational Institute of Western Macedonia, Kastoria, Greece, April 2019.
- 36) Variability in Human Movement. Keynote for the Rehabilitation for the Disabled (ELEPAP), Thessaloniki, Greece, June 2019.

- 37) Variability in Human Movement. Keynote for the 1st International Medical Conference Groin Pain in Football, Thessaloniki, Greece, June 2019.
- 38) Variability in Human Movement. Seminar at the Department of Physiology, University of Patras Medical School, Patras, Greece, November 2019.
- 39) Current Research in the area of Biomechanics and Orthodox Theology. Seminar at the School of Theology, Aristotle University, Thessaloniki, Greece, November 2019.
- 40) Somatic Dysfunction: The Cutting Edge of Neuromusculoskeletal Research. Keynote for the Interdisciplinary Biomedical Research Symposium, AT Still University of Health Sciences, Kirksville, Missouri, USA, October 2018.
- 41) Brain Drain in Young Scientists of Physical Education. Keynote for the 10th International Congress of Sports Medicine, Thessaloniki, Greece, November 2018.
- 42) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Keynote for the 5th International Autumn School on Movement Science, Humboldt University, Berlin, Germany, October 2018.
- 43) Variability in Human Movement. Keynote for the 27th Medical Conference of the Greek Military, Thessaloniki, Greece, October 2018.
- 44) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the University of Nevada Reno, Reno, Nevada, USA, May 2018.
- 45) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the University of Oregon, Eugene, Oregon, USA, May 2018.
- 46) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the EuroMov, Université de Montpellier, Montpellier, France, April 2018.
- 47) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the Department of Physiotherapy, Alexander Technological Educational Institute (A.T.E.I) of Thessaloniki, Thessaloniki, Greece, March 2018.
- 48) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the University of Patras, Patras, Greece, November 2017.
- 49) My Trip. Seminar at the Democritus University, Komotini, Thrace, Greece, November 2017.
- 50) Theories of Motor Control. Seminar at the Democritus University, Komotini, Thrace, Greece, November 2017.
- 51) Applied Optimal Movement Variability: The Nonlinear Approach. Seminar at the Democritus University, Komotini, Thrace, Greece, November 2017.
- 52) The reasons of research. Seminar at the Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 53) Grant Writing. Seminar at the Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 54) Manuscript Writing. Seminar at the Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 55) Mentoring. Seminar at the Aristotle University, Thessaloniki, Macedonia, Greece, November 2017.
- 56) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the University of Georgia, Athens, Georgia, USA, September 2017.
- 57) Variability in Life Can Facilitate Learning to Live Together. Keynote for the 9th Olympiad of the Mind, Chania, Crete, Greece, September 2017.
- 58) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar for the Université Catholique de Louvain, Louvain-la-Neuve, Belgium, June 2017.

- 59) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Keynote for the 25th International Congress on Physical Education and Sport (ICPES), Democritus University, Komotini, Thrace, Greece, May 2017.
- 60) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the Vrije University, Amsterdam, Holland, May 2017.
- 61) Development of Hypothesis and how to write a scientific article. Seminar at the Aristotle University, Thessaloniki, Macedonia, Greece, May 2017.
- 62) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Seminar at the Kings College London, England, April 2017.
- 63) The Importance of Variation in Human Movement. TEDxUNO talk, (<https://www.youtube.com/watch?v=0vjViLFziV4>), Omaha, NE, February 2016.
- 64) Movement variability and the use of nonlinear tools. Keynote for the Second Technical Seminar of Biomechanics: Applications to Rehabilitation, University of Extremadura, Caceres, Spain, January 2016.
- 65) Innovative Analyses of Human Movement. Keynote for the Third Annual Meeting Coimbra Health School, Escola Superior de Tecnologia da Saude de Coimbra, Coimbra Health School, A Universalidade de Coimbra no Ensino da Saude, Coimbra, Portugal, April 2016.
- 66) Innovative Analyses of Human Movement. Keynote for the II Congresso Fisioterapia da Escola Superior de Saude Dr. Lopes Dias, Escola Superior de Saude Dr. Lopes Dias, Instituto Politecnico de Castelo Branco, Castelo Branco, Portugal, April 2016.
- 67) Nonlinear Analysis for Human Movement Variability. Seminar for the Seminario Innovative Analyses of Human Movement Variability: Contributions to the field of Motor Behavior, Laboratorio de Comportamento Motor de Faculdade de Montricidade Humana, University of Lisbon, Lisbon, Portugal, April 2016.
- 68) Harnessing Movement Variability. Seminar for the Walter Reed National Military Medical Center, Bethesda MD, November 2016.
- 69) A perspective on human movement variability: implications for health and pathology. Keynote for the Second International Conference of Sport Sciences, Aristotle University, Thessaloniki, Greece, November 2016.
- 70) Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. Keynote for the Second Annual Motion Analysis Research Center Symposium, Samuel Merritt University, Oakland, CA, November 2016.
- 71) Advanced measures of gait; why, and how, should we (not?) calculate them? Symposium with Bruijn, S., Terrier, P., and Ihlen, E. International Society for Posture and Gait Research, Sevilla, Spain, June 2015.
- 72) Structure of Variability as a Window into what Matters during Mobility. Symposium with Chang, Y.H., and Hausdorff, J. International Society for Posture and Gait Research, Sevilla, Spain, June 2015.
- 73) 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
- 74) A Perspective on Human Movement Variability: Implications for health and pathology. Seminar for the Palacký University of Olomouc, Olomouc, Czech Republic, April 2015.
- 75) A Perspective on Human Movement Variability: Implications for health and pathology. Seminar for the Arizona State University, Phoenix, Arizona, January 2014.

- 76) A Perspective on Human Movement Variability: Implications for health and pathology. Seminar for the University of Florida, Gainesville, Florida, March 2014.
- 77) 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.
- 78) A Perspective on Human Movement Variability with Applications in Infancy Motor Development. Seminar at National Academy of Kinesiology Annual Meeting, Portland, Oregon, September 2012
- 79) 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.
- 80) Research that Shapes the Future of Health Care. Seminar for the University of Nebraska Foundation. Scottsdale, Arizona, February 2012.
- 81) Human movement variability. Seminar for the University of Nebraska at Lincoln, Department of Mechanical and Materials Engineering. Lincoln, Nebraska, October 2011.
- 82) A perspective on human movement variability. Seminar for the University of Minnesota, Department of Kinesiology. Minneapolis, Minnesota, September 2011.
- 83) Research that Shapes the Future of Health Care. Seminar for the University of Nebraska Foundation. Palm Springs, California, February 2011.
- 84) A perspective in human movement variability. Des Moines University Friday Seminar Series. Des Moines, Iowa, October 2010.
- 85) 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.
- 86) Research that shapes the future of health care. Seminar for the University of Nebraska President's Society. Lincoln, Nebraska, May 2010.
- 87) Opportunities in the Nebraska Biomechanics Core Facility. Seminar for the Pre-Health Professionals Club. Omaha, Nebraska, April 2010.
- 88) Research in the Nebraska Biomechanics Core Facility. Seminar for the Department of Biology, spring 2010 Seminar Series. Omaha, Nebraska, March 2010.
- 89) Human Movement variability in neurological sciences. Grand rounds in Neurology. Omaha, Nebraska, October 2009.
- 90) Nebraska Biomechanics Core Facility: Collaborative Research in Action. Clinical and Translational Seminar for the University of Nebraska Medical Center, Omaha, Nebraska, August 2009.
- 91) Human Movement variability in Gait: examples for business related opportunities. Seminar for the Creighton Business School Entrepreneurship Series. Omaha, Nebraska, 2009.
- 92) 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.
- 93) ACL injury and tibial rotation. Keynote at the South Central American Society of Biomechanics Annual Meeting. Odessa, Texas, March 2008.
- 94) Human Movement Variability: Applications for Parkinson's disease. Seminar to the Nebraska Chapter of Parkinson Disease, Support Group. Omaha, Nebraska, March 2008.
- 95) 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.

- 96) 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.
- 97) Infant Sitting Postural Control Studies in Omaha. Seminar for the Pediatric Neurology Department at Children's Hospital. Omaha, Nebraska, January 2008.
- 98) Motor Development from a Nonlinear Perspective. Seminar for the University of Michigan Kinesiology Seminar Series, Ann Arbor, Michigan, November 2007.
- 99) 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, Summit sponsored by the Section on Pediatrics of the American Physical Therapy Association. Alexandria, Virginia, October 2007.
- 100) Research in Geriatrics at the HPER Biomechanics laboratory. Seminar for the Geriatric Research Seminar Series, Omaha, Nebraska, September 2007.
- 101) 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.
- 102) 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.
- 103) Human Movement Variability from a Motor Development Perspective. Keynote at the Human Performance and Wellness Meeting, Las Vegas, Nevada, March 2007.
- 104) 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.
- 105) Exploring variability in human movement. Seminar for the Arizona State University, Tempe, Arizona, March 2005.
- 106) How anterior cruciate ligament deficiency and reconstruction influence tibial rotation. Seminar for the University of Nevada at Las Vegas, Las Vegas, Nevada, November 2004.
- 107) Evaluation of Bio-Rhythms. Seminar for the University of Nevada at Las Vegas, Las Vegas, Nevada, November 2004.
- 108) Human movement variability workshop. Invited lecture at the University of Technology Sydney. Sydney, Australia, February 2011.
- 109) Movement therapy, physiotherapy & skill acquisition. Invited lecture at the Australian Institute of Sport. Canberra, Australia, February 2011.
- 110) Human movement variability for coaches. Invited lecture at the Melbourne Sports Institute. Melbourne, Australia, February 2011.
- 111) 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.
- 112) 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.
- 113) Motor Coordination. Symposium. Instituto de Biomecánica de Valencia, Valencia, Spain, November 2007.

- 114) Human Movement Variability. Symposium. Instituto de Biomecánica de Valencia, Valencia, Spain, November 2007.
- 115) Methods in nonlinear analysis. Symposium. Instituto de Biomecánica de Valencia, Valencia, Spain, November 2007.
- 116) Using nonlinear tools to answer questions in human movement. Department of Exercise and Sport Science of the University of North Carolina at Chapel Hill. Chapel Hill, North Carolina, November 2002.
- 117) Variability issues in Motor Control: Answering questions using nonlinear tools. 1st Biomechanics Invitational Seminar of the University of Nevada Las Vegas. Las Vegas, NV, March 2002.
- 118) Nonlinear analysis of postural function in infants. 14th Congress of the Greek Society of Pediatric Medicine and Health. Thessaloniki, Greece, May 2002.
- 119) Preparation, evaluation, and rehabilitation of athletes. Roundtable. 5th International Symposium of Arthroscopy and Sports Injuries. Thessaloniki, Greece, June 2001.
- 120) Variability and Chaos. Orthopaedic and Athletic Center of Ioannina Medical School. Ioannina, Greece, May 2001.
- 121) The whys and the hows of the single subject analysis. Orthopaedic and Athletic Center of Ioannina Medical School. Ioannina, Greece, May 2001.
- 122) Applications of Biomechanics. Department of Physical Education of the University of Thessalia. Trikala, Greece, May 2001.
- 123) Improving sports performance in running via prevention of injuries. Department of Physical Education of the University of Thessalia. Trikala, Greece, May 2001.
- 124) Gait analysis in sports medicine. Annual Symposium of the Greek Association of Arthroscopy and Knee Surgery. Ioannina, Greece, June 2000.
- 125) Differentiation of the functional timing of lower limb movements and its relation to running injuries. Fourth International Congress on Physical Education and Sport. Komotini, Greece, May 1996.
- 126) Variability in human movement: applications in health sciences. Third Panhellenic Symposium & Eighth Summer School in Complexity and Chaotic Dynamics of Nonlinear Systems. Xanthi, Greece, July 1995.
- 127) Sport shoes and overpronation. First Congress of Preventing Medicine in Sports. Athens, Greece, October 1988.

Oral Research Conference Presentations International (N = 71)

- 1) Kitsikoudis P, Damianou A, Grigoriadis S, Nikodelis T, **Stergiou N**. 3D motion capture systems accurately assess center of mass trajectory, but overestimate jump height in countermovement jumps: a validation against force platforms. 33rd International Congress on Physical Education and Sport Science of the Democritus University of Thrace, Komotini, Greece, 23-25 May 2025.
- 2) Chalitsios C, **Stergiou N**, Nikodelis T. Ground gradient affects stroke-to-stroke fluctuations and gait variability in overground walking. 33rd International Congress on Physical Education and Sport Science of the Democritus University of Thrace, Komotini, Greece, 23-25 May 2025.
- 3) Tziouref M, Grigoriadis S, Mylonas V, Nikodelis T, **Stergiou N**. Upper limb restriction increases whole-body angular momentum and gait variability. 33rd International Congress on Physical

Education and Sport Science of the Democritus University of Thrace, Komotini, Greece, 23-25 May, 2025.

- 4) Grigoriadis S, Mylonas V, Panagiotidou K, Panoutsakopoulos V, **Stergiou N**, Nikodelis T. Older adults display increased force output regularity and slower adaptation after force perturbations. 5th International Conference of Sports Sciences, Thessaloniki, Greece, 6-8 November, 2025.
- 5) Grigoriadis S, Mavromoustakos-Blom P, Arabatzidou D, **Stergiou N**, Nikodelis T. Structured variability can be effectively applied in squat training without compromising accuracy. 5th International Conference of Sports Sciences, Thessaloniki, Greece, 6-8 November, 2025.
- 6) Damianou A, Grigoriadis S, Meselidis G, **Stergiou N**, Nikodelis T. Young adults can track signals of structured variability as accurately as sinewave signals using their grip force. 5th International Conference of Sports Sciences, Thessaloniki, Greece, 6-8 November, 2025.
- 7) Chalitsios C, Mylonas V, **Stergiou N**, Nikodelis T. Stride-to-stride fluctuations and temporal patterns of muscle activity exhibit a stronger correlation during running-induced fatigue. 5th International Conference of Sports Sciences, Thessaloniki, Greece, 6-8 November, 2025.
- 8) Tziouref M, Grigoriadis S, Sifaki A, **Stergiou N**, Nikodelis T. Arm restriction leads to greater whole-body angular momentum in the transverse plane, during the single support phase of the gait cycle. 5th International Conference of Sports Sciences, Thessaloniki, Greece, 6-8 November, 2025.
- 9) Likens, A., Kim, S., Kalaitzi, M., Wiles, T., **Stergiou, N.**, Kingston, D., Arm Swing and Leg Swing during Gait Match Trends of Variability over Time. Canadian Society of Biomechanics Biannual Conference, Edmonton, AB, CA, August 2024.
- 10) Likens, A., Brink, K., Wiles, T., **Stergiou, N.** Increased Entropy in Movements May Enhance Sensorimotor Coordination. Canadian Society of Biomechanics Biannual Conference, Edmonton, AB, CA, August 2024.
- 11) Likens, A., Wiles, T., Kim, S., **Stergiou, N.** The Individuality of Gait Is Retained Within Young, Middle, and Older Adults. Canadian Society of Biomechanics Annual Conference, Edmonton, AB, CA, August 2024.
- 12) Mangalam, M., Kelty-Stephen, D. G., Sommerfeld, J. H., **Stergiou, N.**, Likens, A. D. Temporal organization of stride-to-stride variations during overground walking contradicts predictive models for sensorimotor control. International Conference on Perception and Action, Guadalajara, Mexico, June 2023.
- 13) Wiles, T. M. **Stergiou, N.**, & Likens A. D. Low IMU Sampling Rates Bias Largest Lyapunov Exponent Calculations During Overground Walking. North American Society for the Physiology of Sport and Physical Activity Conference, Toronto, Canada, June 2023
- 14) Kim, S., **Stergiou, N.**, Likens, A. D. Coordination Dynamics of Winners and Losers in the 2015-2016 NBA Season. International Conference on Perception and Action, Guadalajara, Mexico, June 2023.
- 15) Charles, A., **Stergiou, N.**, Likens, A. Walking Metabolic Cost Increases When Synchronizing Steps to Unstructured Visual Cues. North American Congress on Biomechanics, Ottawa, Canada, August 2022
- 16) Raffalt RC, Senderling B, **Stergiou N.** Filtering affects the calculation of the Largest Lyapunov Exponent. 2020 Biomedical Engineering Society Virtual Annual Meeting, October 2020.
- 17) Rowen DA, Silva L, Likens AD, Vas JR, **Stergiou N.** Do older adults synchronize their strides to different stimuli. *International/American Society of Biomechanics Conference*, Calgary, Canada, August 2019.

- 18) Clark L, Senderling B, Gould J, Kaufman C, **Stergiou N**. Kinematic Differences between Professional and Lay Rescuers with and without the Use of Real-time CPR Feedback. *European Resuscitation Council*, Ljubljana, Slovenia, September 2019.
- 19) 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.
- 20) **Stergiou N**, Vaz J, Skiadopoulos A. Human Movement variability and falls in the elderly. *8th World Congress of Biomechanics*, Dublin, Ireland, July 2018.
- 21) 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.
- 22) 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.
- 23) Katsavelis, D. **Stergiou, N**. Nonlinear analysis: Theoretical background and applications. *Invited lecture at the Winter School of Biomechanics*. Sao Paolo, Brazil, July 2009.
- 24) 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 Paolo, Brazil, July 2009.
- 25) 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 Paolo, Brazil, July 2009.
- 26) Katsavelis, D. **Stergiou, N**. The future of biomechanics. *Invited lecture at 13th Congress of the Brazilian Society of Biomechanics*. Sao Paolo, Brazil, July 2009.
- 27) 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.
- 28) 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.
- 29) 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.
- 30) 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 *16th Congress of the European Society of Biomechanics*. Lucerne, Switzerland, July 2008.
- 31) Filipi, M., Leuschen, P., **Stergiou, N.**, Huisinga, J., Agawral, S., Schmaderer, L., Kucera, D. Impact of Resistance Training on Balance in Multiple Sclerosis. *19th International Nursing Research Congress focusing on Evidence –Based Practice*. Singapore, July 2008.
- 32) 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.
- 33) Deffeyes, J.E., Harbourne, R.T., Kyvelidou, A., Stuber, 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.

- 34) 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.
- 35) 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.
- 36) 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.
- 37) 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.
- 38) Zampeli, F., Ristams, 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.
- 39) 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.
- 40) 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) 6th Biennial Congress*, Florence, Italy, May 2007.
- 41) 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.
- 42) Deffeyes, J.E., **Stergiou, N.**, Harbourne, R.T., Kyvelidou, A., DeJong, S.L., Stuberg, 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.
- 43) 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.
- 44) 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 *12th ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress* in Innsbruck, Austria, May 2006.
- 45) **Stergiou, N.** New developments of the UNO Biomechanics Laboratory. *Invited lecture at the University of Ioannina Medical Center*, Thessaloniki, Greece, April 2005.
- 46) 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.

- 47) **Stergiou, N.** How to write a scientific paper. Presented at the *Orthopaedic and Athletic Center of Ioannina Medical School*. Ioannina, Greece, July 2004.
- 48) **Stergiou, N.** Proper selection of sport shoes. Presented at the *Orthopaedic and Athletic Center of Ioannina Medical School*. Ioannina, Greece, July 2004.
- 49) 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 (NASPSPA) annual meeting*. Vancouver, Canada, June 2004.
- 50) Katsavelis, D., **Stergiou, N.**, Korellis, G. The effect of fatigue on running mechanics. Presented at the *12th International Congress on Physical Education and Sport*. Komotini, Greece, May 2004.
- 51) Katsavelis, D., Blanke, D., **Stergiou, N.** The value of gait analysis: a bibliographical evaluation. Presented at the *12th International Congress on Physical Education and Sport*. Komotini, Greece, May 2004.
- 52) 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 *11th ESSKA Congress and 4th World Congress on Sports Trauma*. Athens, Greece, May 2004.
- 53) 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.
- 54) 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 *VIIth International Olympic Committee (IOC) World Congress on Sport Sciences*. Athens, Greece, October 2003.
- 55) 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 *VIIth International Olympic Committee (IOC) World Congress on Sport Sciences*. Athens, Greece, October 2003.
- 56) 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.
- 57) **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.
- 58) **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.
- 59) Kurz, M.J., **Stergiou, N.**, McCormick, K. Markov model suggests neuromuscular aging affects short range correlations present in the gait cycle. Presented at the *IVth World Congress of Biomechanics*. Calgary, CA, August 2002.
- 60) Papadonikolakis, A., Papageorgiou, C.D., Moebius, U.G., Tokis, A.V., Tsepis, 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.
- 61) Georgoulis, A., Papadonikolakis, A., Papageorgiou, C.D., Giakas, G., Tsepis, 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 5th Corso Internazionale, Ortopedia, Biomeccanica e Riabilitazione Sportiva*. Assisi, Perugia, Italy, December 2001.

- 62) 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 *5th Corso Internazionale, Ortopedia, Biomeccanica e Riabilitazione Sportiva*. Assisi, Perugia, Italy, December 2001.
- 63) 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 *1st Icelandic Conference on Arthroscopy and Sports Medicine*. Reykjavik, Iceland, August 2001.
- 64) Papadonikolakis, A., Georgoulis, A., Kosta J., Zacharis, K., **Stergiou, N.** & Soucacos, P.N. Kinematic patterns before and after ACL reconstruction. Presented at the *9th Congress of the European Society of Sports Traumatology, Knee Surgery, and Arthroscopy*. London, England, September 2000.
- 65) **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.
- 66) 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.
- 67) 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.
- 68) **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.
- 69) **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.
- 70) Crusemeyer, 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.
- 71) Bates B.T., **Stergiou, N.** Relationship between subtalar and knee joint function during running on different surfaces. Presented at the *XIVth International Society of Biomechanics Congress*. Paris, France, July 1993.

Oral Research Conference Presentations National (N = 141)

- 1) Likens, A., Kim, S., Wiles, T., **Stergiou, N.** Bridge between Predictability and Complexity in Human Gait. Human Movement Variability Conference, Omaha, NE, USA. May 2024.
- 2) Mangalam, M., Kelty-Stephen, D. G., Sommerfeld, J. H., **Stergiou, N.**, Likens, A. D. Temporal organization of stride-to-stride variations contradicts predictive models for sensorimotor control of walking. 8th Annual Conference in Human Movement Variability, University of Nebraska at Omaha, Omaha, NE, USA, June 2023.

- 3) Charles, A.E., Wong, A.Y., Mills, C, **Stergiou N.**, Likens, A. D. A Wandering Mind Decreases the Temporal Structure of Human Movement. 8th Annual Conference in Human Movement Variability, University of Nebraska at Omaha, Omaha, NE, USA, June 2023.
- 4) Charles, A.E., Wong, A.Y., Mills, C, **Stergiou N.**, Likens, A. D. A Wandering Mind Reduces the Structure of Movement Variability. UNO Research and Creative Activity Fair, Omaha, NE USA, March 2023.
- 5) Brink, K., **Stergiou, N.**, Sommerfeld, J., Likens, A. Irregular Metronomes Alter Bimanual Coordination Dynamics. *North American Society for Psychology for Sport and Physical Activity*, Waikoloa, Hawaii, June 2022.
- 6) Charles, A., **Stergiou, N.**, Likens, A. Steps Synchronization to Unstructured Visual Cues Increases Metabolic Rate. *North American Society for Psychology in Sports and Physical Activity*, Waikoloa, Hawaii, June 2022.
- 7) Hinton, E.H., Bierner S., Kingston, D., **Stergiou, N.**, Kesar, T., Knarr, B. Real-Time Biofeedback Increases Hip Extension Angle in Individuals After Stroke. *Gait & Clinical Movement Analysis Society Annual Meeting*, Texas Children's Hospital, The Woodlands, Texas, June 2022.
- 8) 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.
- 9) 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.
- 10) **Stergiou, N.** Update on Biomechanics and the upcoming addition to the building. UNO Alumni House, Omaha, Nebraska, USA. May 2016.
- 11) 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.
- 12) 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.
- 13) **Stergiou N.** Harnessing Movement Variability to Treat and Prevent Motor Related Disorders. *Surgery Research Forum*, University of Nebraska Medical Center, Omaha, NE, January 2016.
- 14) **Stergiou N.** UNO Biomechanics Resources. *Traumatic Brain Injury Retreat*, University of Nebraska Medical Center, Omaha, NE, December 2016.
- 15) **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.
- 16) **Stergiou, N.** Complexity in aging. *National Academy of Kinesiology Annual Conference*, Philadelphia, PA, September 2015.
- 17) 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.
- 18) 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.

- 19) **Stergiou, N.** Research in the Biomechanics Research Building. *Surgery Research Forum. Regenerative Medicine Program. University of Nebraska Medical Center.* Omaha, NE, February 2014.
- 20) 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.
- 21) **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.
- 22) 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.
- 23) Qiao, M., **Stergiou, N.**, Mukherjee, M. Effects of Visual Flow Speed and Medio-Lateral Restriction on the Variability during Walking. *37th Annual Meeting of the American Society of Biomechanics*, Omaha, NE, September 2013.
- 24) 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 28th Annual Meeting*. New Orleans, LA, USA, November 2012.
- 25) Hunt, N., Haworth, J.L., McGrath, D., Myers, S.A., **Stergiou, N.** Manipulation of the structure of gait variability with rhythmic auditory stimulus. *36th Annual Meeting of the American Society of Biomechanics*. Gainesville, FL, USA, August 2012.
- 26) 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. *34th Annual International Conference of the IEEE Engineering in Medicine & Biology Society*. San Diego, CA, USA, August 2012.
- 27) Vallabhajosula, S., Mukherjee, M., **Stergiou, N.** Effect of tactile perturbation on blindfolded circular navigation. *36th Annual Meeting of the American Society of Biomechanics*. Gainesville, FL, USA, August 2012.
- 28) 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. *36th Annual Meeting of the American Society of Biomechanics*. Gainesville, FL, USA, August 2012.
- 29) 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.
- 30) 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.
- 31) 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. *17th Annual Gait and Clinical Movement Analysis Society Meeting*. Grand Rapids, MI, USA, May 2012.
- 32) Yentes, J.M., Huisinga, J.M., Filipi, M.L., **Stergiou, N.** Clinical and biomechanical measures of balance in multiple sclerosis. *Proceedings of the 17th Annual Gait and Clinical Movement Analysis Society Meeting*. Grand Rapids, MI, USA, May 2012.

- 33) 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. *17th Annual Gait and Clinical Movement Analysis Society Meeting*. Grand Rapids, MI, USA, May 2012.
- 34) 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.
- 35) 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.
- 36) 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.
- 37) 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.
- 38) 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.
- 39) 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.
- 40) 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.
- 41) 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.
- 42) 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.
- 43) 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.
- 44) 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.
- 45) 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.
- 46) 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.

- 47) 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.
- 48) 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.
- 49) 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.
- 50) 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.
- 51) 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.
- 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, 2010.
- 53) 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.
- 54) 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.
- 55) 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.
- 56) 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.
- 57) 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.
- 58) 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.
- 59) 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.
- 60) 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. *34th Annual Midwestern Vascular Surgical Society Meeting*. Indianapolis, Indiana, September 2010.
- 61) 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.
- 62) 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.
- 63) 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. *15th Annual Gait and Clinical Movement Analysis Society Meeting*. Miami, Florida, May 2010.
 - 64) 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.
 - 65) 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.
 - 66) 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. *14th Annual Gait and Clinical Movement Analysis Society Meeting*. Denver, Colorado, March 2009.
 - 67) 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.
 - 68) 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.
 - 69) 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.
 - 70) 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.
 - 71) 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.
 - 72) 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.
 - 73) 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.
 - 74) 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.
 - 75) 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.
 - 76) 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.
 - 77) 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.
- 78) Brown-Clerk, B., Siu, K.C., 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.
- 79) 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.
- 80) 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.
- 81) **Stergiou, N.** Human Movement Variability. *Invited lecture at the University of Ioannina Medical Center*, Thessaloniki, Greece, December 2007.
- 82) 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 93rd Annual Clinical Congress*, New Orleans, Louisiana, October 2007.
- 83) **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.
- 84) 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.
- 85) 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.
- 86) 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.
- 87) 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
- 88) 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.
- 89) 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.

- 90) 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.
- 91) 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.
- 92) 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.
- 93) 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.
- 94) Judkins, T.N., Oleynikov, D., **Stergiou, N.** Robotic surgery and training: Does Augmented feedback help retain performance? Presented at the *30th Annual Meeting of the American Society of Biomechanics*, Blacksburg, Virginia, September 2006.
- 95) 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 *30th Annual Meeting of the American Society of Biomechanics*, Blacksburg, Virginia, September 2006.
- 96) 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.
- 97) 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.
- 98) 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.
- 99) 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.
- 100) 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.
- 101) 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 29th Annual Meeting of the Society*, Chicago, Illinois, September 2005.
- 102) Kurz, M.J., **Stergiou, N.**, Bloomberg, J., & Miller, D. Does Gravity influence the structure of chaotic gait patterns? Presented at the *XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics*, Cleveland, Ohio, August 2005.

- 103) Ryland, K., Wutzke, C., **Stergiou, N.** Nonlinear analysis of postural control in different positions and vision conditions. *Presented at the XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics*, Cleveland, Ohio, August 2005.
- 104) **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.
- 105) 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.
- 106) 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.
- 107) 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.
- 108) Moraiti, T., **Stergiou, N.**, Giakas, G., Mitsou, A., Georgoulis, A. How does the ACL deficient knee behave in different walking speeds? *5th Biennial Congress of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS)*. Hollywood, Florida, April 2005.
- 109) 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 5th Biennial Congress of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS)*. Hollywood, Florida, April 2005.
- 110) Narazaki, K., Oleynikov, D., DiMartino, A., Rentschler, M., **Stergiou, N.** Objective quantification of proficiency in robotic laparoscopy with bimanual inanimate tasks. *Presented at the 13th Annual Medicine Meets Virtual Reality Conference*, Long Beach, California, January 2005.
- 111) 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.
- 112) Kurz, M.J., **Stergiou, N.**, Blanke, D. Does footwear influence the structure of chaotic gait patterns? *Presented at the 28th Annual Meeting of the American Society of Biomechanics*. Portland, Oregon, September 2004.
- 113) Narazaki, K., Oleynikov, D., Dimartino, A., Zebrowski, B.K., Shah, S., **Stergiou, N.** Objective assessment of proficiency in robotic laparoscopy. *Presented at the 17th Annual Nebraska Biomedical Engineering Workshop*, Lincoln, Nebraska, May 2004.
- 114) Kurz, M.J., **Stergiou, N.** A parallel distributed processing network that utilizes a chaotic control scheme for stable locomotion. *Presented at the 17th Annual Nebraska Biomedical Engineering Workshop*, Lincoln, Nebraska, May 2004.
- 115) 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.
- 116) Kurz, M.J., **Stergiou, N.** Insights on chaotic gait patterns form a simple passive dynamic walking model. *Presented at the 16th Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, April 2003.

- 117) **Stergiou, N.** Recent developments in the UNO HPER Biomechanics Laboratory. Presented at the *16th Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, April 2003.
- 118) **Stergiou, N.** Exploring variability in human movement. Presented at the *University of Nevada Las Vegas*, Las Vegas, Nevada, November 2003.
- 119) **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.
- 120) 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.
- 121) Georgoulis, A.D., Ristanis, S., Giakas, G., Moraiti, T., Papageorgiou, C., **Stergiou, N.** Knee tibial internal-external rotation after ACL reconstruction. Presented at the *8th Annual Meeting of the Gait Clinical Movement Analysis Society*, Wilmington, Delaware, May 2003.
- 122) Keenan, S.M., **Stergiou, N.** The effect of speed on performer variability and deterministic origin during locomotion. Presented at the *15th Annual Nebraska Biomedical Engineering Research Workshop*, April 2002.
- 123) Kurz, M.J., **Stergiou, N.** Application of Dynamic Systems Theory for the analysis of gait. Presented at the *15th Annual Nebraska Biomedical Engineering Research Workshop*, April 2002.
- 124) 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.
- 125) 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.
- 126) **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.
- 127) 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.
- 128) 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.
- 129) 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 *25th Annual Meeting of the American Society of Biomechanics*, San Diego, California, August 2001.
- 130) Hreljac, A., **Stergiou, N.**, Scholten, S.D. Lower extremity joint power when running over obstacles. Presented at the *25th Annual Meeting of the American Society of Biomechanics*, San Diego, California, August 2001.
- 131) Dierks, T.A., **Stergiou, N.** Three-dimensional analysis of subtalar and knee joint coupling during running over obstacles. Presented at the *14th Nebraska Workshop on Biomedical Engineering Research*, Omaha, Nebraska, April 2001.
- 132) Buzzi, U.H., **Stergiou, N.** The effects of ACL Reconstruction on Locomotor Variability. Presented at the *14th Nebraska Workshop on Biomedical Engineering Research*, Omaha, Nebraska, April 2001.

- 133) Bates, B.T., Dufek, J.S., Mercer, J.A., **Stergiou, N.** The whys and hows of single subject analysis: a tutorial. Presented at the *24th Annual Meeting of the American Society of Biomechanics*, Chicago, Illinois, August 2000.
- 134) 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 *24th Annual Meeting of the American Society of Biomechanics*, Chicago, Illinois, August 2000.
- 135) 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.
- 136) **Stergiou, N.** A chaotic analysis of gait parameters in different age groups. Presented at the *13th Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, March 2000.
- 137) **Stergiou, N.** Coordination between joints as an injury mechanism. Presented at the *12th Annual Nebraska Biomedical Engineering Research Workshop*, Lincoln, Nebraska, April 1999.
- 138) **Stergiou, N.** Analysis of human gait by chaotic dynamics. Presented at the *10th Annual Nebraska Biomedical Engineering Research Workshop*, Omaha, Nebraska, April 1997.
- 139) **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.
- 140) **Stergiou, N.**, Bates, B.T., Crusemeyer, J.A. The effects of stride length on subtalar and knee joint function. Presented at the *40th National Convention of the American College of Sports Medicine*, Indianapolis, Indiana, May 1994.
- 141) **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 = 385; only out of state are included)

- 1) Wiles TM, Grunkemeyer A, **Stergiou N**, Likens AD. The influence of gait variability on human odometry. 48th American Society of Biomechanics, Pittsburgh, PA, August 2025.
- 2) Kalaitzi Manifrenti M, **Stergiou N**, Likens AD. Walk, stumble, recover faster, and prevent long-term effects with pink noise. 48th American Society of Biomechanics, Pittsburgh, PA, August 2025.
- 3) Wiles TM, Kim SK, **Stergiou N**, Likens AD. What can 400 miles of overground walking tell us about the individuality of gait? 48th American Society of Biomechanics, Pittsburgh, PA, August 2025.
- 4) Mylonas V, Kim SK, Wiles TM, **Stergiou N**, Likens AD. Short walking trials produce reliable Hurst exponents. 48th American Society of Biomechanics, Pittsburgh, PA, August 2025.
- 5) Kim SK, Wiles T, **Stergiou N**, Likens AD. A novel algorithm estimating rates of divergence reveals age-related gait dynamics. 48th American Society of Biomechanics, Pittsburgh, PA, August 2025.
- 6) Kalaitzi Manifrenti M, **Stergiou N**, Likens AD. When inter-limb coordination gets challenging, variability drives transitions. 48th American Society of Biomechanics, Pittsburgh, PA, August 2025.
- 7) Likens, A., Shakerian, N., Wiles, T., Kim, S., Stergiou, N. Age Moderates the Relationship between Body Mass Index and Gait Variability. American Society of Biomechanics, Madison, WI, August 2024.

- 8) Likens, A., Kim, S., Kalaitzi Manifrenti, M., Wiles, T., Kingston, D., Stergiou, N. Arm Swing and Leg Swing during Gait Match Trends of Variability over Time. American Society of Biomechanics Annual Conference, Madison, WI, August 2024.
- 9) Likens, A., Kim, S., Riggan, B., Stergiou, N. Bounding Box Can Streamline Human Gait Recognition. American Society of Biomechanics Annual Conference, Madison, WI, August 2024.
- 10) Likens, A., Kim, S., Wiles, T., Stergiou, N. Distilling Laws of Human Gait Kinematics. American Society of Biomechanics Annual Conference, Madison, WI, August 2024.
- 11) Likens, A., Kim, S., Wiles, T., Stergiou, N. Filling the Gap between Predictability and Complexity of Human Movement. Canadian Society of Biomechanics Annual Conference, Edmonton, AB, Canada. August 2024.
- 12) Likens, A., Wiles, T., Kim, S., Stergiou, N. What Can 350 Miles of Overground Walking Tell Us About the Individuality of Gait? American Society of Biomechanics Annual Conference, Madison, WI, August 2024.
- 13) Kim, S. K., Manifrenti, M. E. K., Wiles, T. M., Kingston, D. C., Stergiou, N., Likens, A. D. Arm swing and leg swing during gait match trends of variability over time. American Society of Biomechanics Annual Meeting 2024, ASB, Madison, WI, August 6, 2024.
- 14) Likens, A., Haghighatnejad, M., Wiles, T., Kim, S., Stergiou, N. Joint Coordination Predicts Stride Variability in Human Walking. American Society of Biomechanics, Madison, WI, March 2024.
- 15) Mangalam, M., Likens, A., Stergiou, N. Leveraging nonlinear descriptors of variability for individualized, reproducible assessment of movement and cognitive performance. NSF DARE Conference 2023: Transformative Opportunities for Modeling in Neurorehabilitation, National Science Foundation, Los Angeles, CA, USA, March 2023.
- 16) Charles, A.E., Wong, A.Y., Mills, C, Stergiou N. S., & Likens, A. D. A Negative Relationship Between Human Movement Variability and Mind Wandering. American Society of Biomechanics Annual Conference. Knoxville, TN, USA, August 2023.
- 17) Wiles, T. M., Kim, S., Stergiou, N. & Likens, A. D. Biometrics Using Full Body Human Movement Variability Gait Data. American Society of Biomechanics Annual Conference, Knoxville, TN, USA, August 2023.
- 18) Brink, K., Wiles, T., Stergiou, N., & Likens A. Time Evolution is a Source of Bias in the Wolf Algorithm for Largest Lyapunov Exponents. American Society of Biomechanics Annual Conference, Knoxville, TN, USA, August 2023.
- 19) Kim, S., Stergiou, N., Likens, A. D. Relative Phase Reveals Distinct Coordination Dynamics Between Winning and Losing Teams. American Society of Biomechanics Annual Conference, Knoxville, TN, USA, August 2023.
- 20) Wiles, T. M., Mangalam, M., Sommerfeld, J. H., Kim, S. K., Brink, K. J., Charles, A. E., Grunkemeyer, A. A., Manifrenti, M. K., Mastorakis, S., Stergiou, N., & Likens, A.D. NONAN GaitPrint: A public repository of overground walking data. International Society of Posture & Gait Research Conference, Brisbane, Australia, July 2023.
- 21) Brink K, Stergiou N, Sommerfeld J, Likens A. Irregular Metronomes Alter Bimanual Coordination Dynamics. North American Congress on Biomechanics, August 2022.
- 22) Grunkemeyer A, Sommerfeld J, Brink K, Likens A, Stergiou N. Team coordination dynamics of winning NBA teams. North American Congress on Biomechanics, August 2022.

- 23) Hinton E, Steffensen E, Bierner S, Kingston D, Stergiou N, Kesar T, Knarr B. Visual Biofeedback During Overground Walking Increases Walking Speed in Individuals Post-Stroke. North American Congress on Biomechanics, August 2022.
- 24) Senderling B, Stergiou N, Likens AD. Neuromuscular influences on the divergence of joint angles during repetitive motion. Society for Neuroscience, November 2021.
- 25) Charles A, Antonellis P, Stergiou N, Likens AD. Walking metabolic cost increases when synchronizing your steps to invariant or white noise visual cues but not pink noise. Society for Neuroscience, November 2021.
- 26) Brink K, Stergiou N, Likens A. Modeling spatial asymmetry in visuomotor coordination. Virtual XXVIII Congress of the International Society of Biomechanics, July 2021.
- 27) Raffalt PC, Kent JA, Stergiou N. The inter-limb coupling in individuals with transtibial amputation during bilateral stance is direction dependent. Virtual XXVIII Congress of the International Society of Biomechanics, July 2021.
- 28) Vaz JR, Cortes N, Gomes JS, Pezarat-Correia P, Stergiou N. Evidence of neuromuscular changes as a function of temporal structure of metronomes during walking. Virtual 45th Meeting of the American Society of Biomechanics, August 2021.
- 29) Brzezinski S, Cortes N, Gomes JS, Reis JF, Stergiou N, Vaz JR. Running stride-to-stride fluctuations are not affected by physiological intensity. Virtual 45th Meeting of the American Society of Biomechanics, August 2021.
- 30) Myers S, Leutzinger T, Koutakis P, Fuglestad M, Despiegelaere H, Johanning J, Stergiou N, Longo M, Casale G, Pipinos I. Gait Impairments Are Independent Of The Level Of Arterial Occlusive Disease In Claudicating Patients With Peripheral Artery Disease. 48th Annual Symposium on Vascular Surgery, Miami, Florida, March 2021.
- 31) Biscardi L, Cortes N, Gomes J, Reis JF, Stergiou N, Vaz JR. Running to a fractal-like stimulus preserves the complexity of stride-to-stride fluctuations. Virtual 44th Meeting of the American Society of Biomechanics, August 2020.
- 32) Sloan C, Likens AD, Sommerfeld J, Stergiou N. Autocorrelation and Probability Distributions in Gait-Metronome Synchronization. Virtual 44th Meeting of the American Society of Biomechanics, August 2019.
- 33) Silva L, Likens AD, Rowen D, Vaz JR, Knarr B, Stergiou N. Synchronization between Stride Time Intervals and External Visual Cueing. International Society of Biomechanics/American Society of Biomechanics, Calgary Canada, August 2019.
- 34) Silva L, Likens AD, Rowen D, Vaz JR, Knarr B, Stergiou N. Multifractal Analysis of Visually Cued Stride Intervals. International Society of Biomechanics/American Society of Biomechanics, Calgary, Canada, August 2019.
- 35) Sotirakis H, Patikas D, Stergiou N, Hatzitaki V. Can a fractal visual motion cue modulate postural sway complexity? International Society of Posture and Gait Research, Edinburgh, Scotland, July 2019.
- 36) Skiadopoulos A, Allen K, Stergiou N. The Effect of a Novel Task Intervention on Gait Variability in Older Adults. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
- 37) Sommerfeld JH, Likens AD, Stergiou N. Isolating aspects of gait through the use of pacing signals. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
- 38) Ravi DK, Singh NB, Taylor WR, Skiadopoulos A, Stergiou N. Do rhythmic auditory stimuli enhance recovery against unexpected perturbations? A novel approach to quantify resilience

- during walking. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
- 39) Silva L, Likens AD, Rowen D, Vaz JR, Knarr B, Stergiou N. Multifractal Analysis of Visually Cued Stride Intervals. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
 - 40) Silva L, Likens AD, Rowen D, Vaz JR, Knarr B, Stergiou N. Synchronization between Stride Time Intervals and External Visual Cueing. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
 - 41) Likens AD, Silva L, Rowen D, Vaz JR, Stergiou N. Multifractal Correlation Reveals Variation in Complexity Matching across Metronome Types. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
 - 42) Raffalt PC, Kent JA, Wurdeman SR, Stergiou N. Task constraints during locomotion affect movement attractor dynamics more than scaling a control parameter. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
 - 43) Sloan I, Kent JA, Likens AD, Takahashi KZ, Stergiou N. Subthreshold vibration influences the posture and gait of transtibial amputees. International/American Society of Biomechanics Conference, Calgary, Canada, August 2019.
 - 44) Senderling B, Gould JR, Clark L, Stergiou N. Real-time Feedback Affects the Movement Patterns of Professional- and Lay- Rescuers Performing Cardiopulmonary Resuscitation. 2019 Biomedical Engineering Society Annual Meeting, Philadelphia, PA, USA, August 2019.
 - 45) 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.
 - 46) 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.
 - 47) Kent JA, Takahashi KZ, Stergiou N. Do people with a transtibial amputation have a rougher ride on uneven terrain? American Society of Biomechanics Annual Meeting, Rochester, MN, USA. August 2018.
 - 48) 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.
 - 49) 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.
 - 50) 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.
 - 51) 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.
 - 52) 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.

- 53) 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.
- 54) 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.
- 55) 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.
- 56) 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.
- 57) 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.
- 58) 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.
- 59) 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.
- 60) 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.
- 61) 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.
- 62) 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.
- 63) 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.
- 64) 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.
- 65) 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.
- 66) 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.

- 67) 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.
- 68) 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.
- 69) 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.
- 70) 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.
- 71) 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.
- 72) 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.
- 73) 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.
- 74) 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.
- 75) 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.
- 76) 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.
- 77) 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.
- 78) 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.
- 79) 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.
- 80) 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.

- 81) 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.
- 82) 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.
- 83) 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.
- 84) 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.
- 85) 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.
- 86) 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.
- 87) 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.
- 88) 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.
- 89) 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.
- 90) 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.
- 91) 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.
- 92) 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.
- 93) 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.
- 94) 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.
- 95) 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.

- 96) 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.
- 97) 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.
- 98) 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.
- 99) 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.
- 100) 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.
- 101) 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.
- 102) 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.
- 103) 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.
- 104) 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.
- 105) 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.
- 106) 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.
- 107) 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. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 108) 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.
- 109) 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.
- 110) Chien JH, Huang CK, Mukherjee M, Siu CK, Stergiou N. Sensory interaction under perturbations during locomotion in healthy individuals. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.

- 111) 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.
- 112) Cutler E, Wurdeman S, McGrath D, Myers S, Stergiou N, Huisinga J. Margin of Stability As a Metric for Balance Impairment in Multiple Sclerosis. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 113) 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. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 114) 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.
- 115) 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.
- 116) 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. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 117) 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.
- 118) 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.
- 119) 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.
- 120) 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.
- 121) Haworth JL, Kokkoni E, Harbourne R, Stergiou N. Evaluating concurrent development of cognitive and motor behavior in typical and delayed infants. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 122) Huang CK, Chien JH, Mukherjee M, Siu KC. Reduced light intensity alters spatiotemporal gait patterns during treadmill walking 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 123) 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 1st Joint World Congress. Trondheim, Norway, June 2012.
- 124) 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.

- 125) Hunt N, Cignetti F, Stergiou N. Evidence of different control processes in the maintenance of standing and sitting posture. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 126) 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.
- 127) 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. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 128) Korgan W, Wurdeman SR, Stergiou N. Effects of altered potential energy during gait: Implications of center of mass displacement in space flight. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 129) 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.
- 130) 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. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 131) McGrath D, Stergiou N. The effects of auditory stimulation on gait variability in healthy elderly. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 132) 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.
- 133) 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.
- 134) Renz JJ, Vallabhajosula S, Hunt N, Chien JH, Stergiou N. Differences in stride interval variability during stair-climbing and treadmill walking. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 135) Renz JJ, Stergiou N. Adaptations in joint kinetics over consecutive steps in stair negotiation. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012. (50%)
- 136) Vallabhajosula S, Renz JJ, Chien JH, Hunt N, Stergiou N. Influence of stepping rate on stride interval variability of stair-climbing. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 137) 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. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 138) Vallabhajosula S, Yentes J, Tan CW, Siu KC, Stergiou N. Impact of starting position on variability of neuromuscular control during stair negotiation. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 139) 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.

- 140) Wurdeman SR, Yentes JM, Myers SA, Jacobsen AL, Stergiou N. Both limbs in unilateral transtibial amputees display increased risk for tripping. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 141) Wurdeman SR, Myers SA, Stergiou N. Transtibial amputee joint motion has larger Lyapunov exponents. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 142) 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.
- 143) Wurdeman SR, Myers SA, Stergiou N, Pipinos II, Johanning JM. External work is deficient in both limbs of patients with unilateral PAD. 7th Annual Academic Surgical Congress. Las Vegas, NV, USA. February 2012.
- 144) Wurdeman SR, Myers SA, Huben N, Stergiou N. Direction of gait affects attractor divergence. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 145) 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.
- 146) Yentes, J.M., Rennard, S.I., Stergiou, N. Walking abnormalities in patients with COPD. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 147) Yentes JM, Stergiou N. Gait in patients with COPD is mainly affected in proximal musculature. 4th Annual Student Research and Creative Activity Fair. Omaha, NE, USA, February 2012.
- 148) Yu Y, Haworth JL, Vallabhajosula S, Harbourne RT, Stergiou N. Children with cerebral palsy may not benefit from stochastic vibration when developing independent sitting. 36th Annual Meeting of the American Society of Biomechanics. Gainesville, FL, USA, August 2012.
- 149) 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.
- 150) Arnold B, Decker LM, Potter J, Stergiou N. Cognitive challenge causes a differential control of joint kinematics with aging. Proceedings of the 3rd Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 151) Carey J, Huisinga J, Stergiou N. Resistance training alters joint powers in multiple sclerosis patients. Proceedings of the 3rd Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 152) Chien JH, Huang C-K, Huben NB, Siu KC, Stergiou N. Sensory interaction under perturbations during locomotion in healthy individuals. Proceedings of the 41st Annual Meeting of the Society for Neuroscience. Washington DC, November 2011.
- 153) 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 16th Annual Gait and Clinical Movement Analysis Society Meeting, Bethesda, Maryland, May 2011.
- 154) 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 3rd Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.
- 155) Hasenkamp, R., Wurdeman, S., Stergiou, N. Variability of movement in an altered inertial dynamics task. Proceedings of the 3rd Student Research and Creative Activity Fair, Omaha, Nebraska, March 2011.

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- 268) 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 94th Annual Clinical Congress of the American College of Surgeons, San Francisco, California, October 2008.
- 269) 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.
- 270) 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.
- 271) 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.
- 272) 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 16th Congress of the European Society of Biomechanics, Lucerne, Switzerland. July 2008.
- 273) 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 (NASPSA) 2008, Niagara Falls, Ontario. June 2008.
- 274) 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 (NASPSA) 2008, Niagara Falls, Ontario. June 2008.
- 275) 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 (NASPSA) 2008. Niagara Falls, Ontario. June 2008.
- 276) 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 (NASPSA) 2008, Niagara Falls, Ontario. June 2008.
- 277) 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.
- 278) 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 XVIth Biennial International Conference on Infant Studies, Vancouver, Canada, March 2008.
- 279) 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 XVIth Biennial International Conference on Infant Studies, Vancouver, Canada, March 2008.

- 280) 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 XVIth Biennial International Conference on Infant Studies, Vancouver, Canada, March 2008.
- 281) 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.
- 282) 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.
- 283) 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 37th annual meeting of the Society for Neuroscience, San Diego, California, November 2007.
- 284) 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 37th annual meeting of the Society for Neuroscience. San Diego, California, November 2007.
- 285) 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.
- 286) 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.
- 287) Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Stuber, W.A., Kyvelidou, A., Stergiou, N. Approximate Entropy is Robust to Non-Sationarity in Analysis of Infant Sitting Postural Sway. Poster presentation at the American Society of Biomechanics 2007 Annual Meeting, Stanford, California, August 2007.
- 288) 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.
- 289) 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) 18th International Conference, Burlington, Vermont, July 2007.
- 290) Tanwar, H., Decker, L., Husinga, 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) 18th International Conference, Burlington, Vermont, July 2007.
- 291) 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.

- 292) 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.
- 293) 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 6th Biennial Congress, (International Society of Arthroscopy and Knee Surgery and Orthopedic Sports Medicine) 2007, Florence, Italy, May 2007.
- 294) 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 6th Biennial Congress, (International Society of Arthroscopy and Knee Surgery and Orthopedic Sports Medicine) 2007, Florence, Italy, May 2007.
- 295) Kyvelidou, A., Stuberg, 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 12th Annual Meeting, Springfield, Massachusetts. April 2007.
- 296) DeJong, S.L., Harbourne, R.T., Kyvelidou, A., Stuberg, 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 12th Annual Meeting, Springfield, Massachusetts, April 2007.
- 297) Kyvelidou, A., Stergiou, N., Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Stuberg, 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.
- 298) 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.
- 299) 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.
- 300) 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.
- 301) 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.
- 302) 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 30th Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.
- 303) Katsavelis, D., Kyvelidou, A. and Stergiou, N. The effect of fatigue on movement variability during running. Poster presentation at the 30th Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.
- 304) Kochi, N., Deffeyes, J.E., Harbourne, R.T., DeJong, S.L., Stuberg, 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 30th Annual Meeting of the American Society of Biomechanics, Blacksburg, Virginia, September 2006.
- 305) Kurz, M.J. Stergiou, N. Can hip joint actuations be used to control the structure of chaotic locomotion? Poster presentation at the 30th Annual Meeting of the American Society of Biomechanics. Blacksburg, Virginia, September 2006.
 - 306) 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.
 - 307) 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 12th ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress in Innsbruck, Austria, May 2006.
 - 308) 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 12th ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress in Innsbruck, Austria, May 2006.
 - 309) 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 12th ESSKA 2000 (European Society of Sports Traumatology Knee Surgery and Arthroscopy) Congress in Innsbruck, Austria, May 2006.
 - 310) Volkman, K., Stergiou, N., Stuber, 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.
 - 311) Stergiou, N., Harbourne, R.T., Deffeyes, J.E., DeJong, S.L., Stuber, 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.
 - 312) 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.
 - 313) 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.
 - 314) Hurt, C.P., Hreljac, A., Kurz, M.J., Stergiou, N. Is there a gait transition between run and sprint? Presented at the XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, August 2005.
 - 315) Judkins, T.N., Narazaki, K., Oleynikov, D., Stergiou, N. Electromyographic correlates of robotic laparoscopic training. Presented at the XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
 - 316) 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 XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.

- 317) 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 XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 318) Miller, D., Stergiou, N., Kurz, M.J. An improved surrogate method for detecting the presence of chaos in gait. Presented at the XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 319) 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 XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 320) Scott-Pandorf, M.M., Pipinos, I.I., Judkins, T, Stergiou, N. The effect of peripheral arterial disease on gait. Presented at the XXth Congress of International Society of Biomechanics and 29th Annual Meeting of the American Society of Biomechanics, Cleveland, Ohio, August 2005.
- 321) Judkins, T.N., Narazaki, K., Oleynikov, D., Stergiou, N. Electromyographic frequency response of robotic laparoscopic training. Presented at the IEEE 9th International Conference on Rehabilitation Robotics, Chicago, Illinois, July 2005.
- 322) 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.
- 323) 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.
- 324) 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.
- 325) Georgoulis, A.D., Ristanis, S., Patras, K., Tsepi, 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 51st Annual Meeting of the Orthopaedic Research Society, Washington, D.C., February 2005.
- 326) 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. 72nd Annual Meeting of the American Academy of Orthopaedic Surgeons, AOSSM Specialty Day, Washington DC, February 2005.
- 327) Kurz, M.J., Stergiou, N. An artificial neural network that utilizes a chaotic control scheme for stable locomotion. Presented at the 28th Annual Meeting of the American Society of Biomechanics, Portland, Oregon, September 2004.
- 328) Korellis, G., Wutzke, C.J., Kurz, M.J., Stergiou, N. Nonlinear analysis of postural control in different positions. Presented at the 28th Annual Meeting of the American Society of Biomechanics, Portland, Oregon, September 2004.
- 329) 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 (NASPSA) annual meeting, Vancouver, Canada, June 2004.

- 330) 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.
- 331) 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.
- 332) Markopoulou, K., Kurz, M.J., Buzzzi, U.H., Stergiou, N. Gait dynamics in Parkinson's Disease. Presented at the 56th Annual Meeting of the American Academy of Neurology. San Francisco, California, April 2004.
- 333) 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.
- 334) 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 71st Annual Meeting of the American Association of Orthopaedic Surgeons, San Francisco, California, March 2004.
- 335) Moraiti, T., Stergiou, N., Giakas, G., Ristanis, S., Georgoulis, A.D. Stability of the ACL deficient knee in different walking speeds. Presented at the 50th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, March 2004.
- 336) 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 50th Annual Meeting of the Orthopaedic Research Society, San Francisco, California, March 2004.
- 337) 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.
- 338) 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 VIIth International Olympic Committee (IOC) World Congress on Sport Sciences, Athens, Greece, October 2003.
- 339) Kurz, M.J., Stergiou, N., Foster, T. Controlling bifurcations and chaotic gait with hip joint actuations in a simple walking model. Presented at the 27th Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 340) 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 27th Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 341) 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 27th Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 342) Hreljac, A., Stergiou, N., Imamura, R., Caseblot, J., Sison, M. Ankle and knee joint kinetics during running and sprinting. Presented at the 27th Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.
- 343) Scott, M.M., Stergiou, N. Baseline measures are altered in biomechanical studies. Presented at the 27th Annual Meeting of the American Society of Biomechanics, Toledo, Ohio, September 2003.

- 344) 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 4th Biennial Congress of the International Society of Arthroscopy Knee surgery and Orthopaedic Sports medicine, Auckland, New Zealand, March 2003.
- 345) 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 4th Biennial Congress of the International Society of Arthroscopy Knee surgery and Orthopaedic Sports medicine, Auckland, New Zealand, March 2003.
- 346) 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 70th Annual meeting of the American Academy of Orthopaedic Surgeons New Orleans, Louisiana, February 2003.
- 347) 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.
- 348) 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.
- 349) Kurz, M.J., Stergiou, N., Scott, M.M. Individuals with ACL reconstruction display altered coordination strategies while walking and running. Presented at the IVth World Congress of Biomechanics, Calgary, Canada, August 2002.
- 350) 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 IVth World Congress of Biomechanics, Calgary, Canada, August 2002.
- 351) Kurz, M.J., Stergiou, N. Individuals with ACL reconstruction display altered long-range fractal gait patterns. Presented at the IVth World Congress of Biomechanics, Calgary, Canada, August 2002.
- 352) Kurz, M.J., Stergiou, N., McCormick, K. Markov model suggests neuromuscular aging affects short-range correlations present in the gait cycle. Presented at the IVth World Congress of Biomechanics, Calgary, Canada, August 2002.
- 353) Buzzi, U.H., Stergiou, N., Markopoulou, E. A dynamical analysis of parkinsonian gait. Presented at the IVth World Congress of Biomechanics, Calgary, Canada, August 2002.
- 354) Keenan, S.M., Stergiou, N. The reliability of the Lyapunov Exponent during treadmill walking. Presented at the IVth World Congress of Biomechanics, Calgary, Canada, August 2002.
- 355) Keenan, S.M., Stergiou, N. The effect of speed on the determinist origin of the variability present during human locomotion. Presented at the IVth World Congress of Biomechanics, Calgary, Canada, August 2002.
- 356) Hreljac, A. Stergiou, N., Scholten, S.D. Lower extremity joint power when running over obstacles. Presented at the 25th Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 357) Kurz, M.J., Stergiou, N. Neuromuscular variability during locomotion is affected by footwear. Presented at the 25th Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.

- 358) Kurz, M.J., Stergiou, N. The spanning set defines variability in locomotive patterns. Presented at the 25th Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 359) 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 25th Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 360) Buzzi, U.H., Stergiou, N., Giakas, G., Dierks, T.A. The effect of ACL reconstruction on locomotor variability. Presented at the 25th Annual Meeting of the American Society of Biomechanics, San Diego, California, August 2001.
- 361) 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 18th Congress of the International Society of Biomechanics. Zurich, Switzerland, July 2001.
- 362) Stergiou, N., Buzzi, U.H., Hageman, P.A., Heidel, J. A chaotic analysis of gait parameters in different age groups. Presented at the 24th Annual Meeting of the American Society of Biomechanics, Chicago, Illinois, August 2000.
- 363) Stergiou, N., Scholten, S.D., Houser, J., Dierks, T., Blanke, D. Segmental interactions during running over obstacles of increasing height. Presented at the 24th Annual Meeting of the American Society of Biomechanics, Chicago, Illinois, August 2000.
- 364) 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 24th Annual Meeting of the American Society of Biomechanics, Chicago, Illinois, August 2000.
- 365) 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 XIth Congress of the Canadian Society for Biomechanics, Montreal, Quebec, August 2000.
- 366) 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.
- 367) 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.
- 368) Stergiou, N., Jensen, J.L., Bates, B.T., Houser J. A Dynamical Systems investigation of lower extremity coordination during running. Presented at the XVIIth Congress of the International Society of Biomechanics, Calgary, Canada, August 1999.
- 369) 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.
- 370) 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.
- 371) 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.
- 372) 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.
- 373) 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.
 - 374) 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.
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