Dobromir Dotov, PhD

Assistant Professor
Department of Biomechanics
University of Nebraska Omaha
6001 Dodge St, Omaha, NE 68182-0860
ddotov@unomaha.edu | +1 402 554 4194

Education

BA 2007, Franklin & Marshall College, PA, USA

PhD 2013, University of Connecticut (Perception-Action-Cognition Divis, Dept of Psychology)

Academic History

Post-doc, LIVELab, Psychology, Neuroscience & Behaviour, McMaster University, Hamilton, Canada

Post-doc, Centro de Ciencias de la Complejidad (C3) and Instituto de la Neurobiología (INB), Universidad Nacional Autónoma de México

Post-doc, EuroMov, Movement to Health Laboratory, Université de Montpellier, France

Research

Publications [1385 citations, h=21, i10=27, https://scholar.google.com/citations?user=U-sLAnIAAAAJ]

Dotov D, Gu J, Hotor P, & Spyra J (2025). Analysis of High-Dimensional Coordination in Human Movement Using Variance Spectrum Scaling and Intrinsic Dimensionality, *Entropy, 27*(4).

Bourdon A, Damm L, **Dotov D**, Ihalainen P, Dalla Bella S, Bardy BG & Cochen De Cock V (2025). Gait ecological assessment in persons with Parkinson's disease engaged in a synchronized musical rehabilitation program, *npj Parkinson's Disease, 11*(12). https://doi.org/10.1038/s41531-024-00852-6

Dotov D & Froese T (in press). Embodied AI based on dynamic human-computer interaction. In SL Macrine, JMB Fugate, A Abdulali & J Hughes (Eds.), *Towards Embodied Intelligence: Embodied Cognition * Embodied Artificial Intelligence*, MIT Press.

Dotov D, Camarena D, Harris Z, Spyra J, Gagliano P, & Trainor LJ (preprint). If Turing played piano with an artificial partner. *arXiv:2402.08690*. doi: doi.org/10.48550/arXiv.2402.08690

Dotov D, Motsenyat A, & Trainor LJ (2024). Concurrent Supra-Postural Auditory–Hand Coordination Task Affects Postural Control: Using Sonification to Explore Environmental Unpredictability in Factors Affecting Fall Risk. *Sensors, 24*(6), 1994. doi: 10.3390/s24061994

Dotov D, & Paxton A (2023). Grounding social timing: A commentary on "The evolution of social timing" by Verga et al. (2023) *Physics of Life Reviews*, 24. 8–10 doi: 10.1016/j.plrev.2023.11.005

Dotov D, Cochen de Cock V, Bardy B, & Dalla Bella S (2023). Evidence for coordination rigidity in the gait, posture, and speech of persons with Parkinson's disease. *Journal of Motor Behavior*. doi: 10.1080/00222895.2023.2217100

Ramírez-Vidal L, Molina-Villa T, Mendoza V, Peralta-Álvarez CA, Poot-Hernández AC, **Dotov D**, López-Casillas F (2023). Betaglycan promoter activity is differentially regulated during myogenesis in zebrafish embryo somites. *Developmental Dynamics*. 1-18. doi:10.1002/dvdy.602

Dotov D, Delasanta L, Cameron DJ, Large E, & Trainor L (2022). Collective dynamics support group drumming, reduce variability, and stabilize tempo drift. *eLife*, 1:11. e74816. doi:10.7554/eLife.74816

Dotov D (2022). On the scaling properties of oscillatory modes with balanced energy. *Frontiers in Network Physiology*. 2:974373. doi:10.3389/fnetp.2022.974373

Cameron D, **Dotov D**, Flaten E, Bosnyak D, Hove MJ, & Trainor LJ (2022). Undetectable very-low frequency sound increases dancing at a live concert. *Current Biology, 32*. R1-R2. doi:10.1016/j.cub.2022.09.035

Wood E, Chang A, Bosnyak D, Klein L, Baraku E, **Dotov D**, & Trainor LJ (2022). Creating a shared musical interpretation: Changes in coordination dynamics while learning unfamiliar music together. *Annals of the New York Academy of Sciences.* doi:10.1111/nyas.14858

Cochen de Cock V, **Dotov D**, Damm L, Lacombe S, Picot MC, et al. (2022). Classifying idiopathic RBD, controls and Parkinson's disease using gait parameters. *Movement Disorders*, *37*(4). 842–846. doi:10.1002/mds.28894

Dotov D & Trainor L (2021). Cross-frequency coupling explains the preference for simple ratios in rhythmic behaviour and the relative stability across non-synchronous patterns. *Philosophical Transactions B, 376*(1835). doi:10.1098/rstb.2020.0333

Cochen de Cock V, **Dotov D**, Damm L, Lacombe S, Ihalainen P, et al. (2021). BeatWalk: personalized music-based gait rehabilitation in Parkinson's disease. *Front Psychol*. doi:10.3389/fpsyg.2021.655121

Chang A, Li Y-C, Chan JF, **Dotov D**, Cairney J, & Trainor L (2021). Inferior Auditory Time Perception in Children With Motor Difficulties. *Child Development*, *2*(5), e907-e923. doi:10.1111/cdev.13537

Dotov D, Bosnyak D, & Trainor L (2021). Collective music listening: Movement energy is enhanced by groove and visual social cues. *Quarterly Journal of Experimental Psychology, 74*(6), 1037-1053. doi:10.1177/1747021821991793

Dotov D & Froese T. (2020) Dynamic Interactive Artificial Intelligence: Sketches for a Future AI Based on Human-Machine Interaction. In *ALIFE 2020: The 2020 Conference on Artificial Life*. (pp. 139–145). MIT Press. doi:10.1162/isal_a_00350

Harrison S, Kinsella-Shaw J, & **Dotov D** (2020). Effects of footedness and stance asymmetry confirm an inter-leg metastable coordination dynamics of standing posture. *Journal of Motor Behavior, 53*(2), 135-156. doi:10.1080/00222895.2020.1740151

Dotov D, Turvey MT, & Frank TD. (2019) Embodied gestalts: Unstable visual phenomena become stable when they are stimuli for competitive action-selection *Attention, Perception & Psychophysics*, *81*(7), 2330-2342. doi:10.3758/s13414-019-01868-4

Dotov D, Cochen de Cock, Geny, Ihalainen, Moens, Leman, Bardy, & Dalla Bella (2019). The role of mutual synchronization and predictability in entraining walking with an auditory beat. *Journal of Experimental Psychology: General, 148*(6), 1041–1057.

Zapata-Fonseca L, **Dotov D**, Fossion R, Froese T, Schilbach L, Vogeley K, Timmermans B (2018) Multi-scalar coordination of distinctive movement patterns during embodied interaction between adults with high-functioning autism and neurotypicals. *Frontiers in Psychology: Developmental Psychology*. doi:10.3389/fpsyg.2018.02760

Buhmann J, Moens B, Van Dyck E, **Dotov D**, Leman M (2018) Optimizing beat synchronized running to music *PLoS ONE, 13*(12), e0208702.

Dotov D, Froese T (2018) Entraining chaotic dynamics: A novel movement sonification paradigm could promote generalization *Human Movement Science, 61*, 27–41.

Dotov D, Froese T (2018) Mutual synchronization and control between artificial chaotic system and human. *ALIFE 2018: The 2018 Conference on Artificial Life*, pp. 109–110.

Dalla Bella S, **Dotov DG**, Bardy B, Cochen de Cock V (2018) Individualization of music-based rhythmic auditory cueing in Parkinson's disease. *Ann NY Acad Sci, 1423*, 308—317. doi:10.1111/nyas.13859

Cochen de Cock, **Dotov DG**, Ihalainen P, Galtier F, Bayard, S, Lebrun C, Picot MC, Driss V, Landragin N, Geny C, Bardy B, Dalla Bella S (2018) Rhythmic abilities and musical training in Parkinson's disease: Do they help? *npj Parkinson's Disease, 4*.

Gámez J, Yc K, Ayala YA, **Dotov D**, Prado L, Merchant H (2018) Predictive rhythmic tapping to isochronous and tempo changing metronomes in the non-human primate. *Annals of the New York Academy of Sciences, 1423*, 396–414. doi:10.1111/nyas.13671

Moens B, Van Noorden L, De Wilde W, Lesaffre M, Cambier D, **Dotov D**, Santens, DP, Blomme J, Soens H, & Leman M (2017) Effects of adaptive-tempo music-based RAS for Parkinson's disease patients. *Proceedings of the ESCOM 2017 conference*.

Roy C, Lagarde J, **Dotov DG**, & Dalla Bella S (2017) Walking to a multisensory beat. *Brain and Cognition, 113*, 172–183.

Dotov DG, Nie L, Jinks A, Wojcik K, Yu X, & Chemero A (2017) Movement, physiological and cognitive measures associated with the transition to presence-at-hand. *New Ideas in Psychology, 45C*, 1–10.

Dotov DG, Bayard S, Cochen de Cock V, Geny C, Driss V, Garrigue G, ... & Dalla Bella S (2017) Biologically-variable rhythmic auditory cues are superior to isochronous cues in fostering natural gait variability in Parkinson's disease. *Gait & Posture, 51*, 64–69.

Zapata-Fonseca L, **Dotov D**, Fossion R, & Froese T (2016) Movements during dyadic embodied interaction are characterized by complexity matching whereas veridical social awareness is predicted by reduced variability. *Frontiers in Psychology: Cognition*

Dotov DG, Bardy B, & Dalla Bella S (2016) The role of environmental constraints in walking: Effects of steering and sharp turns on gait dynamics. *Scientific Reports, 6*(28374); doi:10.1038/srep28374.

Dotov DG (2016) Commentary: Perception-action mutuality does not obviate emergence or the animal's active role in the perceptual act. *Constructivist Foundations, 11*(2), 308–309.

Frank TD & **Dotov DG** (2016) Coarse-grained order parameter dynamics of the synergetic computer and multistable perception in schizophrenia. In A. Pelster & G. Wunner (Eds.), *Selforganization in Complex Systems: The Past, Present, and Future of Synergetics* (pp. 247–262). (In the series *Understanding Complex Systems*) Berlin: Springer.

Dotov DG, Kim S, & Frank TD (2015). Non-equilibrium thermodynamical description of rhythmic motion patterns of active systems: a canonical-dissipative approach. *BioSystems, x*(xxx). doi:10.1016/j.biosystems.2015.01.002

Dotov DG (2014). Putting reins on the brain. How the body and environment use it. *Frontiers in Human Neuroscience, 8*(599). doi:10.3389/fnhum.2014.00795

Dotov DG, & Chemero A (2014). Experimental phenomenology: Implications for theories of perception and movement science. In M. Cappuccio & T. Froese (Eds.), *Enactive Cognition at the Edge of Sense-Making: Making Sense of Non-Sense* (pp. 37–60). Basingstoke, UK: Palgrave Macmillan.

Dotov DG, Frank TD, & Turvey MT (2013). Balance affects prism adaptation: evidence from the latent aftereffect. *Experimental Brain Research*, *231*(4), 425–432.

Frank TD, Kim S, & **Dotov DG**, (2013). Canonical-dissipative non-equilibrium energy distributions: Parameter estimation via implicit moment method, implementation, and application. *International Journal of Modern Physics B*, *27*(28).

Dotov DG, Nie L, & de Wit M (2012). Understanding affordances: history and contemporary development of Gibson's central concept. *Avant: Journal of the Philosophical-interdisciplinary Vanguard* (a publication of the Nicolaus Copernicus University, Toruń, Poland), *3*(2), 28–39.

Dotov DG & Frank TD (2011). From the W-method to the canonical-dissipative method for studying uni-manual rhythmic behavior. *Motor Control*, *15* (4), 550–67.

Frank TD, **Dotov DG**, & Turvey MT (2011). A canonical-dissipative approach to control and coordination in the complex system agent-task-environment. In F. Danion & M. L. Latash (Eds.), *Motor control: theories, experiments, and applications* (pp. 50–71). New York, NY: Oxford University Press.

Dotov DG, Nie L, & Chemero A (2010). A Demonstration of the Transition from Ready-to-Hand to Unready-to-Hand. *PLoS ONE*, *5*(3), e9433.

Patent

Bardy BG et al. (2019). Mobile system allowing adaptation of the runner's cadence. US patent # 62/537 558, filed July 26, 2018, and issued January 31, 2019.

Teaching

Fall 2013: Statistical Analysis (at University of Hartford). text: Gravetter, F.J. & Wallnau, L.B. (2013). Statistics for the behavioral sciences. Belmont, CA: Thomson/Wadsworth.

Fall 2012: Research Methods Laboratory

Summer 2012: MATLAB seminar

Spring 2012: Sensation and Perception Laboratory

Fall 2011: Cognitive Psychology. text: Parkin, A. J. (2000). Essential Cognitive Psychology. East Sussex, UK: Psychology Press.

Spring 2011: Research Methods Laboratory

Fall 2010: Research Methods Laboratory

Spring 2010: Research Methods Laboratory

Fall 2009: Research Methods Laboratory

Spring 2009: Introduction to Psychology Laboratory

Fall 2008: Introduction to Psychology Laboratory

Spring 2008: Introduction to Psychology Laboratory

Mentoring, Research Assistants, Thesis Students

Abaham Azahel Betancourt Vera, Victoria Cheesman, Jillian Chesney, Fayelene Pinch, Ariel Motsenyat

Grants and Fellowships

(NIH, PI Dobromir Dotov, USD)

Virtual piano partner with expressive timing via learned complex dynamics (CIFAR, PI Laurel Trainor, CAD10k)

Movement sonification for testing mobility in the context of interacting with a complex stimulus in the environment (MIRA, PI Laurel Trainor, CAD40k)

Arts Research Board (McMaster University, PI Laurel Trainor, CAD3k)

Open- and closed-loop strategies for improving the timing accuracy of a neurally controlled robotic device in complex duration sequences (Universidad Nacional Autonoma de Mexico, MXN384k)

Possibility of controlling chaotic systems by hand motions (CONACYT, MXN360k)

Software, Skills, Languages

Matlab, R, Python, GNU/Linux; used to know some Java and C/C++

European Computational Motor Control Summer School, Montpellier 2015

Machine Learning Workshop, Montreal AI & Neuroscience (MAIN), 2018

Bulgarian (native), English (fluent), French (basic), Spanish (beginner)

Neurotree/Psychtree

Check out my academic lineage here on `Academictree.org`, maybe we are connected.

Web

Scholar profile: list of links to papers

Twitter `@Dobri_Dotov`; Mastodon `@Dobri_Dotov`

Self-hosted page listing some papers and side-projects: `http://dotov.synology.me/wordpress/dobri`

Collection of lab videos, demos, and talks: `https://vimeo.com/user79581964`

Reviewer profile: `https://www.webofscience.com/wos/author/record/J-8257-2015`

We were mentioned on Wired.com: `http://www.wired.com/2010/03/heidegger-tools/`

Referees

Prof. Simone Dalla-Bella, simone.dalla.bella at umontreal.ca , International Laboratory for Brain, Music, and Sound Research (BRAMS), Montreal

Prof. Michael T. Turvey, michael.turvey at uconn.edu , University of Connecticut; Haskins Laboratories

Prof. Benoît Bardy, benoit.bardy at umontpellier.fr , Université de Montpellier; Institut Universitaire de France

Prof. Laurel Trainor, ljt at mcmaster.ca , McMaster University, Ontario

Prof. Hugo Merchant, hugomerchant at unam.mx , Instituto de Neurobiología, Universidad Nacional Autónoma de México, México

Prof. Anthony Chemero, anthony.chemero at uc.edu , University of Cincinnati

Dr. Tom Froese, t.froese at gmail.com, OIST, Japan

Prof. Claudia Carello, claudia.carello at uconn.edu , University of Connecticut

Dr. Till D. Frank, till.frank at uconn.edu , University of Connecticut

Talks

Dotov D (2023, June) *Temporal Wisdom of Crowds in Group Synchronization*. ICPA2023, Guadalajara, México.

Dotov D, Trainor L (2022, July) *If Turing played piano with an artificial partner*. MTS-22: Achieving Togetherness in Ensemble Performance, online and Vienna, Austria.

Dotov (2022, March) *From HKB to cross-frequency coupling: Trying to explain complex patterns of sensorimotor coordination*. Mathematical Biology Seminar, NJIT, NJ

Dotov (2022, January) *Collective dynamics support group drumming, reduce variability, and stabilize tempo drift*. Music in the Brain, Aarhus University, DK

Dotov D, Trainor L (2021, July) *A role of collective dynamics in interpersonal interaction studied by way of group drumming*. ICMPC16-ESCOM11, Sheffield, UK

Dotov D (2021, June) *Neural resonance in the primate premotor cortices during the motor preparation stage of a synchronization task with discrete periodic stimuli*, RPPW 2021, Oslo, Norway.

Dotov D (2021, May) *HCI needs to embrace reverse self-organization and decide if computers are equipment or agents*. Workshop on Emergent Interaction:Complexity, Dynamics, and Enaction in HCI. ACM CHI 2021.

Dotov D (2021, April) *Why all the fuss about anticipation and negative asynchronies?* NEST, Storrs, CT.

Dotov D, Froese T (2020, July) *Dynamic Interactive Artificial Intelligence: Sketches for a Future AI Based on Human-Machine Interaction*, ALife 2020.

Dotov D (2020, May). *Evidence for neural resonance and a mix of low- and high-dimensional activity in the primate premotor cortices during a perceptual task with periodic auditory stimuli*, Neuromatch 2.0, online.

Dotov D (2020, April) *Dynamic Interactive Minimal Artificial Intelligence with Examples from Human Sensorimotor Control*, NERCCS, online.

Dotov D (2019, October) *Preference for simple ratios in the relative phase of bimanual rhythmic tapping*, TRF2, Querétaro, México.

Dotov D, Trainor L (2019, July) *Collective performance facilitates anticipatory synchronization in group drumming*, ICPA, Gröningen, NL.

Dotov D, Bosnyak D, Trainor L (2019, August) *Emergent coordination dynamics in quartets of synchronized drummers differ qualitatively from those of dyads*, SMPC, New York, NY.

Dotov D (2019, June). *Coordination dynamics in a quartet of synchronized drummers: Emergent properties are qualitatively different from those of dyads*, RPPW, Traverse City, MI.

Dotov D (2019, March). *Collective music makers and music listeners: Anticipatory synchronization in a quartet of synchronizing drummers and an enhanced embodied response to music in collective setting*, EuroMov, Montpellier, France.

Dotov D (2019, April). *Collective phenomena in sensorimotor synchronization: How the collective central moment stabilizes group drumming*, New England Regional Conference on Complex Systems, Binghamton, New York.

Dotov D (2019, April). *The relative phase of bimanual rhythmic tapping exhibits preference for simple ratios*, New England Sequencing and Timing, Storrs, CT.

Dotov D (2019, January). *TBD*. De Sinapsis, Ensambles y Sistemas Dinámicos, CDMX, Mexico.

Dotov D (2018, July). *Mutual synchronization and predictability in entraining walking to a musical beat*. 15th International Conference on Music Perception and Cognition, 10th triennial conference of the European Society for the Cognitive Sciences of Music, Montreal, Canada.

Dotov D (2018, July). *Collective listening: groove, tempo, and visual coupling among audience members affects physical engagement with the music*. 15th International Conference on Music Perception and Cognition, 10th triennial conference of the European Society for the Cognitive Sciences of Music. Montreal, Canada.

Dotov D, Froese T (2018, July). *Mutual synchronization and control between artificial chaotic system and human*. The 2018 Conference on Artificial Life (ALIFE). Tokyo, Japan.

Dotov D (2018, April). *Collective listening: Effects of groove, tempo, and visual coupling among audience members on physical engagement with the music*. New England Sequencing and Timing. Storrs, CT.

Dotov D (2018, March). *From dynamic systems theory to dynamic remedies: Adaptive cueing of impaired gait and control of unstable dynamics through hand motion sonification*. University of Nebraska, Omaha.

Dotov D (2016, December). *The quantification of patterns of movement coordination reveals increased stability or increased regularity in three different motor skills in Parkinson's disease*, Physiological Data and Time Series Analytics Workshop. Northumbria University, Newcastle, UK.

Dotov D (2016, November). *Quantifying rigid patterns of coordination across different motor skills in Parkinson's disease*, Multidisciplinary workshop on the analysis of medical, physiological and biological data. CDMX, México.

Dotov D (2016, October). *Chaos synchronization as an auditory-motor task for improved motor learning*, Dynamic Days Latin America and the Carribean. Puebla, México.

Dotov D & Froese, T. (2016, June). *Comparative enactivism*. Biological Foundations of Enactivism workshop, ALIFEXV. Cancún, México.

Dotov DG (2015, December). *Quantifying and improving rigid patterns of coordination across different domains of motor skill in Parkinson's disease*. Multi-disciplinary workshop: Joint Action and Perception in Emergent Phenomena. Cuernavaca, México.

Dotov DG (2015, November). *Breaking the Perception-Action cycle: Experimental phenomenology of Nonsense and its implications for theories of perception and movement science*. UAEM, Cuernavaca, México.

Dotov DG (2015, October). *Quantifying and improving rigid patterns of coordination across different domains of motor skill in Parkinson's disease*. Institut des Sciences du Mouvement, Aix-Marseille Université.

Dotov DG (2015, July). *Possibilities for action stabilize the perception of multistable displays*. at 18^{th} International Conference on Perception and Action. Minneapolis, MN.

Dotov DG, Bayard, S., Cochen de Cock, V., Bardy, B., & Dalla Bella, S. (2015, July). *Selecting the optimal strategy for the adaptive rhythmic auditory cueing of Parkinsionian walk*. at 18^{th} International Conference on Perception and Action. Minneapolis, MN.

Dotov DG, Bayard, S., Cochen de Cock, V., Bardy, B., & Dalla Bella, S. (2015, July). *Stimulus type and variability increase the effects of rhythmic auditory cueing on the parkinsonian walk*. RPPW15. Amsterdam, The Netherlands.

Gifford T, Srinivasan, S., Kaur, M., Dotov, D., Wanamaker, C., Dressler, G., Marsh, K., & Bhat, A. (2011, November). *Using robots to teach musical rhythms to typically developing children and children with autism*. Talk given at International Conference on Education, Informatics, and Cybernetics: icEIC 2011. Orlando, USA.

Dotov DG & Frank, T. D. (2011, July). *Uni-manual rhythmic behavior across a range of frequencies analyzed using the canonical-dissipative method*. Talk given at 16^{th} International Conference on Perception and Action. Ouro Preto, Brazil.

Gifford T, Dotov, D. G., & Bhat, A. (2011, May). *Drumming manipulations within robot child contexts*. Talk given at 2011 New England Manipulation Symposium. New Haven, CT.

Dotov DG (2010, July). *A demonstration of the transition from ready-to-hand to unready-to-hand*. Talk given at 2010 North American Meeting of the International Society for Ecological Psychology. Normal, IL.

Dotov DG, Moreno, M., Eaton, T., & Carello, C. (2010, March). *Articulatory jaw and lip movements and phonological fluency*. Talk given at New England Sequencing and Timing, Twentieth annual meeting. New Haven, CT.

Dotov DG (2009, March). *Dynamics of rhythms at resonance: variability of unimanual pendulum oscillation at and away from resonance*. Talk given at New England Sequencing and Timing, Nineteenth annual meeting. New Haven, CT.

Posters

Dotov D (2022, August). *Coupling between postural and supra-postural levels of control is negatively associated with performance of the supra-postural auditory-hand coordination task*, NACOB 2022, Ottawa, Canada.

Dotov D (2020, May). *Cross-frequency coupling explains preference for simple ratios in the relative phase of bimanual rhythmic tapping*, CNS, online.

Dotov D, Betancourt A, Gámez J, & Merchant H 2019 *Evidence for neural resonance in the primate premotor cortices during a perceptual task with periodic auditory stimuli*. TRF2. Querétaro, México.

Dotov D 2019 *Does group performance beyond the dyad (N>2) facilitate anticipatory synchronization in the drumming circle?*. Joint Action Meeting VIII, Genoa, Italy.

Dotov D 2019 *Occluded but not hidden: Learning to interact with complex dynamics with causal depth*. PMC, Amsterdam, NL.

Dotov D 2019 *Occluded but not hidden: Learning to interact with complex dynamics with causal depth*. ICPA, Gröningen, NL.

DeCock VC, Dotov D, Damm L, Picot M, Ihalainen P, Driss V, ... & Dalla Bella S 2019. *BeatPark: a new wearable device for gait auto-rehabilitation in Parkinson's disease delivering adapted musical stimulation: 2096*. Movement Disorders, 34.

Zhang J, Dotov D 2018. *The complexity of phase relations in bimanual tapping is consistent with the Stern-Brocot hierarchy of ratios*. NeuroMusic 2018, Hamilton, ON.

Trainor L, Dotov D, Bosnyak D 2018. *Collective listening: Effects of groove, tempo, and visual coupling among audience members on physical engagement with the music*. Cognitive Neuroscience Society, 25th Annual Meeting. Boston, MA.

Dotov, D. G., Cochen de Cock, V., Geny, C., Ihalainen, P., Moens, B., Bardy, B., & Dalla Bella, S. 2017. *Role of mutual synchronization and predictability in entraining walking to a musical beat*. 13th Annual NeuroMusic Conference. Hamilton, Canada.

Dotov, D. G., Cochen de Cock, V., Geny, C., Ihalainen, P., Bardy, B., & Dalla Bella, S. 2017. *Automatic classification of Parkinson's disease requires the evaluation of complementary motor skills involved in gait, posture, sensorimotor synchronization, and speech production*. Progress in Motor Control XI. Miami, FL.

Dotov, D. G., 2017. *Control of unstable dynamics through movement sonification as a novel paradigm for improved generalization in motor learning*. Progress in Motor Control XI. Miami, FL.

Zapata-Fonseca, L., Dotov, D., Fossion, R., Froese, T., Schilbach, L. & Timmermans, B. 2017. *Quantifying multi-scale variability during embodied interaction: High-functioning autism as a case study*. Conference on Complex Systems. Cancún, México

Moens, B., Van Noorden, L., de Wilde W., Lesafre, M., Cambier, D., Dotov, D., Santens, P., &, Leman, M. 2017. *Effects of adaptive-tempo music-based RAS for Parkinsonś disease patients*. European Society for Cognitive Sciences Of Music. Ghent, Blegium.

Dotov, D.G. & Froese, T. (2016, June). *A set theoretic analysis shows different forms of closure in autopoietic theory, computational autopoiesis, and (M,R)-systems*. Poster presented at ALIFEXV. Cancún, México.

Dotov, D.G., Bayard, S., Cochen de Cock, V., Geny, C., Bardy, B., & Dalla Bella, S. (2015, October). *Walking to a musical beat in Parkinson's disease: Benefits of stimulus variability and patient's synchronization*. Poster presented at BRAMS: The Next Ten Years. Montreal, Canada.

Dotov, D.G., Bayard, S., Cochen de Cock, V., Torre, K., Bardy, B., & Dalla Bella, S. (2014, October). *Beat complexity and variability may optimize the effects of rhythmic auditory cueing on the Parkinsonian walk*. Poster presented at 4th International Congress on Complex Systems in Sports and Healthy Ageing. Groningen, The Netherlands.

Wojcik, K., Nie, L., Dotov, D. G., & Chemero, A. (2012, June), *Experimental phenomenology and extended cognition*. Poster presented at 38th Annual Meeting of the Society for Philosophy and Psychology. Boulder, CO.

Dotov, D. G. & Stepp, N. (2011, July). Hypersets analysis of some physical systems and their numerical implementations. In E. Charles & L.J. Smart (Eds.), *Studies of perception & action XI: Proceedings of the sixteenth international conference on perception and action* (pp. –).

Nie, L., Dotov, D. G., & Chemero, A. (2011, July). Readiness-to-hand, extended cognition, and multi-fractality. In L. Carlson, C. Hoelscher, & T.F. Shipley (Eds.), *Proceedings of the 33rd Annual Meeting of the Cognitive Science Society* (pp. 1835–1840). Austin, TX: Cognitive Science Society.

Dotov, D. G., Nie, L., & Chemero, A. (2010, June). *Heidegger in the Lab*. Poster presented at 36th Annual Meeting of the Society for Philosophy and Psychology. Portland, OR.

Dotov, D. G., & Carello, C. (2010, April). *Articulatory Jaw and Lip Movements and Phonological Fluency*. Poster presented at the UCONN Language Fest. Storrs, CT.

Dotov, D. G., Stephen, D. G., Frank, T. D., & Turvey, M. T. (2009). Variability of uni-manual pendulum oscillation at and away from resonance. In J. B. Wagman & C. P. Pagano (Eds.), *Studies of perception & action X: Proceedings of the fifteenth international conference on perception and action* (pp. 8–11). New York, NY: Psychology Press.

Dotov, D. G. & Chemero, A. C. (2007, March). Detection of Entropy in the Array Allows Two-Layer Networks to Discriminate Same and Different. *Proceedings of the 14th Annual International Conference On Comparative Cognition.*

Thompson, R. K. R., Hagmann, C. E., Dotov, D. G., & Templer, V. L. (2007, March). Can Capuchin monkeys (Cebus apella), like Humans, Discriminate Relations-Between-Relations? Maybe ... Maybe not. *Proceedings of the 14th Annual International Conference On Comparative Cognition.*

Swisher, N., Dotov, D. G., & Chemero, A. (2006). Ascribing agency and the embodied Turing test. *Proceedings of the 10th International Conference on Artificial Life: Workshops*, 40–45.

Last updated: May 2, 2025