

Sasha Reschechtko

Assistant Professor
School of Exercise and Nutritional Sciences
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Pronouns: He/Him

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Education

- **Pennsylvania State University** University Park, PA, United States
PhD, Kinesiology 2018
- **Pennsylvania State University** University Park, PA, United States
MS, Kinesiology 2015
- **University of Chicago** Chicago, IL, United States
BA, Philosophy 2011

Professional Appointments

- **Assistant Professor** August 2021-
Exercise and Nutritional Sciences, San Diego State University
- **Postdoctoral Associate** 2018-2021
Physiology & Pharmacology, University of Western Ontario
- **Graduate Research & Teaching Associate** 2013-2018
Kinesiology, Pennsylvania State University
- **Research Associate** 2012-2013
Physical Therapy, University of Illinois at Chicago

Research Funding

- **Summer Undergraduate Research Program** Summer 2022
San Diego State University \$3,500 USD
– Role: Mentor
- **Weber Honors College Research Fellows Program** Fall 2022
San Diego State University \$1,000 USD
– Role: Mentor
- **CIHR Postdoctoral Fellowship** 2020-2023
Canadian Institutes of Health Research (CIHR) \$135,000 CAD
– Role: P.I.
- **BrainsCAN Postdoctoral Fellowship** 2018-2023
Western BrainsCAN (Canada First Research Excellence Funds) \$182,000 CAD
– Role: P.I.

- **BrainsCAN Postdoctoral Fellows Collaborative Research Grant** 2020-2021
Western BrainsCAN (Canada First Research Excellence Funds) \$2,762 CAD
 – Role: Co-P.I.
- **NSERC Engage Grant** 2018
Natural Sciences and Engineering Research Council of Canada (NSERC) \$25,000 CAD
 – Role: Collaborator

Honors & Awards

- **CIHR Postdoctoral Fellow** 2020-2021
Canadian Institutes of Health Research
- **BrainsCAN Postdoctoral Associate** 2018-2021
University of Western Ontario
- **Trainee Professional Development Award** 2017
Society for Neuroscience
- **Joseph & Jean Britton Distinguished Graduate Fellowship** 2013-2014
Pennsylvania State University
- **B.A. General Honors** 2011
University of Chicago

Invited Presentations

1. The Action Club, Pennsylvania State University, University Park, PA, USA (2022). “Talking to the hand: sensory questions, motor answers.”
2. Department of Kinesiology, Pennsylvania State University, University Park, PA, USA (2022). “How research happened to me.”
3. School of Exercise & Nutritional Sciences, San Diego State University, San Diego, CA, USA (2021). “Cutaneous inputs for on-line hand control.”
4. Human Neuromechanics Laboratory, University of Florida, Gainesville, FL, USA (2017). “A Few Takes on Multi-Finger Action.”
5. The Action Club, Pennsylvania State University, University Park, PA, USA (2017). “What do we control when we control our fingers?”
6. Sensorimotor Superlab, University of Western Ontario, London, ON, CAN (2017). “Parsing Multi-Finger Action.”

Publications

1. Forgaard CJ, **Reschechtko S**, Gribble PL, Pruszyński JA. Skin and muscle receptors shape coordinated fast feedback responses in the upper limb. *Current Opinion in Physiology* 20: 198-205. 2021. (Review)

2. **Reschechtko S**, Pruszyński JA. Stretch Reflexes. *Current Biology* 30: R1025-R1030. 2020. (Review)
3. **Reschechtko S**, Pruszyński JA. Voluntary modification of rapid tactile-motor responses during reaching differs from its visuo-motor counterpart. *Journal of Neurophysiology* 124: 284-294. 2020.
4. de Freitas PB, Freitas SMSF, **Reschechtko S**, Corson T, Lewis ML, Huang X, Latash ML. Synergic control of action in levodopa-naïve Parkinson’s disease patients: I. Multi-finger interaction and coordination. *Experimental Brain Research* 238: 229-245. 2020.
5. **Reschechtko S**, Johansson AS, Pruszyński JA. Maintaining arm control during self-triggered and unpredictable unloading perturbations. *European Journal of Neuroscience*. 50: 3531-3543. 2019.
6. **Reschechtko S**, Wang H Alendry K, Benson C, Hahn B, Zhang W. Effect of Sensory Deprivation on Maximal Force Abilities from Local to Non-local Digits. *Journal of Motor Behavior* 52: 58-70. 2019.
7. Zhang W, **Reschechtko S**, Hahn B, Benson C, Youssef E. Force-stabilizing synergies can be retained by coordinating sensory-blocked and sensory-intact digits. *PLoS ONE* 14: e0226596. 2019.
8. **Reschechtko S**, Latash ML. Stability of hand force production. II. Ascending and descending synergies. *Journal of Neurophysiology* 120: 1045-1060. 2018.
9. **Reschechtko S**, Cuadra C, Latash ML. Force illusions and drifts observed during muscle vibration. *Journal of Neurophysiology* 119: 326-336. 2018.
10. Mehler DMA, **Reschechtko S**. Movement variability is processed bilaterally by inferior parietal lobule. *Journal of Neuroscience* 38: 2413-2415. 2018. (Review)
11. Hasanbarani F, **Reschechtko S**, Latash ML. Performance drifts in two-finger cyclical force production tasks performed by one and two actors. *Experimental Brain Research* 236: 779-794. 2018.
12. Cuadra C, Bartsch A, Tiemann P, **Reschechtko S**, Latash ML. Multi-finger synergies and the muscular apparatus of the hand. *Experimental Brain Research* 236: 1383-1393. 2018.
13. **Reschechtko S**, Latash ML. Stability of hand force production. I. Hand level control variables and multifinger synergies. *Journal of Neurophysiology* 118: 3152-3164. 2017.
14. **Reschechtko S**, Hasanbarani F, Akulin VM, Latash ML. Unintentional force changes in cyclical tasks performed by an abundant system: Empirical observations and a dynamical model. *Neuroscience* 350: 94-109. 2017.
15. **Reschechtko S**, Zatsiorsky VM, Latash ML. The synergic control of multi-finger force production: stability of explicit and implicit task components. *Experimental Brain Research* 235: 1-14. 2017.
16. Liu X, **Reschechtko S**, Wang S, Pai YCC. The recovery response to a novel unannounced laboratory-induced slip: the “first trial effect” in older adults. *Clinical Biomechanics* 48: 9-14. 2017.
17. Solnik S, **Reschechtko S**, Wu YH, Zatsiorsky VM, Latash ML. Interpersonal synergies: static prehension tasks performed by two actors. *Experimental Brain Research* 234: 2267-2282. 2016.
18. **Reschechtko S**, Zatsiorsky VM, Latash ML. Task-specific stability of multifinger steady-state action. *Journal of Motor Behavior* 47: 365-377. 2015.
19. Solnik S, **Reschechtko S**, Wu YH, Zatsiorsky VM, Latash ML. Force-stabilizing synergies in motor tasks involving two actors. *Experimental Brain Research* 234: 2267-2282. 2015.

20. **Reschechtko S**, Zatsiorsky VM, Latash ML. Stability of multifinger action in different state spaces. *Journal of Neurophysiology* 112: 3209-3218. 2014.

Conference Abstracts and Presentations

1. **Reschechtko S**, Pruszyński JA. Voluntary modification of rapid tactile-motor responses during reaching differs from its visuo-motor counterpart. The Southern Ontario Motor Behaviour Symposium, Online: June 2020.
2. **Reschechtko S**, Pruszyński JA. Rapid modification of an ongoing reach using touch. Society for Neuroscience, Chicago IL: October 2019.
3. **Reschechtko S**, Johansson AS, Pruszyński JA. Maintaining arm control during self-triggered and unpredictable unloading perturbations. 29th Annual Meeting of the Society for Neural Control of Movement. Toyama, Japan: 2019.
4. Zhang W, **Reschechtko S**, Wang H, Alendry K, Benson C, Hahn B. Interactive effect of somatosensory and visual feedback on force production and coordination during isometric pressing tasks. Progress in Clinical Motor Control: Neurorehabilitation I. University Park, USA: July 2018.
5. **Reschechtko S**, Latash ML. Hierarchical organization of force and moment stabilizing synergies in the space of theoretical control variables. Society for Neuroscience, Washington, DC, USA: November 2017.
6. Cuadra CJ, **Reschechtko S**, Latash ML. Force illusions caused by muscle vibration. Society for Neuroscience, Washington, DC, USA: November 2017.
7. **Reschechtko S**, Latash ML. Force stabilizing synergies in spaces of theoretical control variables: Effects of visual feedback. Progress in Motor Control XI, Miami, USA: July 2017.
8. **Reschechtko S**, Wang H, Alendry K, Benson C, Hahn B, Zhang W. Absent somatosensory feedback decreases maximal force abilities in isometric pressing tasks. Progress in Motor Control XI, Miami, USA: July 2017.
9. **Reschechtko S**. Unintentional Force Changes in Cyclical Tasks Performed by an Abundant System. Penn State Graduate Exhibition, University Park, USA: March 2017.
10. **Reschechtko S**, Ambike S, Quao M, Solnik S, Zhou T, Latash ML. Force illusions caused by muscle vibration. Violations of equifinality under transient perturbations: The back-coupling hypothesis. Society for Neuroscience, Washington, DC, USA: November 2014
11. Mattos D, **Reschechtko S**, Zhou T, Zatsiorsky VM, Latash ML. Motor Equivalence in Actions by Redundant Motor Systems. Society for Neuroscience, Washington, DC, USA: November 2014.
12. Solnik S, Ambike S, Wu YH, **Reschechtko S**, Latash ML. Performance-stabilizing Synergies in Motor Tasks Involving Two Actors. Society for Neuroscience, Washington, DC, USA: November 2014.

Teaching Experience

- **Motor Learning and Performance** San Diego State University
Instructor of Record Fall 2021, Spring 2022
 - Upper level, high enrollment course.
- **Pedagogical Training** Western University
Advanced Teaching Program 2019
 - Completed modules focused on course development and active learning best practices.
 - Completed teaching practicums.
- **Physiology & Pharmacology Laboratory** Western University
Faculty Supervisor Fall 2018, 2019
 - Supervised students and TAs doing motor neuroscience projects.
 - Consulted on data collection, experimental design, and statistics.
- **The Neurobiology of Motor Control and Development** Pennsylvania State University
Teaching Assistant 2015-2017
 - Ran review sessions, held office hours, consulted with professor on test development.
 - Upper level course in Kinesiology.
- **Biomechanics** Pennsylvania State University
Laboratory Instructor 2014-2018
 - Delivered laboratory course content, supervised lab activities, and held office hours.
 - Upper level course in Kinesiology.
- **Movement Disorders** Pennsylvania State University
Guest Lecturer Spring 2015, 2018
 - Delivered lectures on neurophysiology and neuroimaging.
 - Upper level course in Kinesiology.

Undergraduate Trainees

- **Wylianne Pangan** San Diego State University
Exercise & Nutritional Sciences Summer 2022
- **Cynthiya Gnanaseelan** Western University
Physiology & Pharmacology Fall 2019 – Summer 2021
 - Awarded an Undergraduate Student Research Award from the Natural Sciences and Engineering Research Council of Canada for Summer 2020 (national competition).
 - Awarded an Undergraduate Student Research Internship from Schulich School of Medicine and Dentistry at Western University for Summer 2021 (school competition).
- **Alice Tan** Western University
Physiology & Pharmacology Spring 2021 – Summer 2021
- **Si-Cheng Dai** Western University
Physiology & Pharmacology Fall 2020 – Spring 2021
 - Honors undergraduate thesis student
- **Tingting (Lexie) Wu** Western University
Physics, Medical Science Fall 2019 – Spring 2020
- **Phoung (Bea) Nguyen** Western University
Physiology & Pharmacology Summer 2019

Service

- Member: School of Exercise & Nutritional Sciences Diversity & Inclusion Committee.
- Ad hoc Reviewer for: *Journal of Neurophysiology, Experimental Brain Research, IEEE Transactions on Haptics, IEEE Transactions on Biomedical Engineering, Journal of Neuroscience, Journal of Open Source Software, Journal of Motor Behavior, PLoS ONE, Motor Control.*
- Contributor: *Sensorimotor Superlab Reading List* (weekly reading list in sensorimotor neuroscience with over 800 email subscribers: <https://superlab.ca>).
- Judge: *Physiology & Pharmacology Research Day Poster Awards* (2020).