

Sebastian Musslick

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Current position

Graduate Student (3rd year), Princeton Neuroscience Institute

Education

- 2014-present PH.D., Princeton University, Neuroscience, Advisor: Jonathan D. Cohen
2008-2014 Diplom (MSc equivalent), Technische Universität Dresden, Psychology (*Graduated with Distinction*), Advisor: Thomas Goschke
Diplom Thesis: "The Role of Task-Feature Bindings in Cued Task Switching."

Positions

- 2013-2014 Visiting Student Research Scholar, Princeton University, PI: Jonathan D. Cohen
2012-2013 Short-Term Scholar, Colorado University at Boulder, PI: Randall C. O'Reilly
2011-2013 Student Research Assistant, Technische Universität Dresden, PI: Clemens Kirschbaum
2011-2012 Student Research Assistant, Technische Universität Dresden, PI: Thomas Goschke
2008-2012 Freelance Work, Software Development and Design

Fellowships & Awards

- 2015 Ehrenfried-Walter-von-Tschirnhaus-Award for best graduates of the School of Science, Technische Universität Dresden
2014-15 McDonnell Fellowship in Neuroscience, Princeton University
2014 Werner-Straup-Award for distinctive achievements in scientific qualification, Technische Universität Dresden
2014 Doctoral Scholarship of the Collaborative Research Center "Volition and Cognitive Control" at the Technische Universität Dresden
2012-14 National Scholarship (Deutschlandstipendium)
2012-13 DAAD PROMOS Global Scholarship
2012 "Karl-und-Charlotte-Bühler-Preis" for excellent teaching, Technische Universität Dresden

Publications & Presentations

PEER-REVIEWED CONFERENCE PAPERS

Cohen J. D., Dey B., Griffiths T., **Musslick S.**, Özcimder K., Reichman D., Shinkar I., Wagner T. (under review). A Graph-Theoretic Approach to Multitasking. *Innovations in Theoretical Computer Science*.

Musslick S., Dey B., Özcimder K., Patwary M., Willke T. L., Cohen J. D. (accepted). Controlled vs. Automatic Processing: A Graph-Theoretic Approach to the Analysis of Serial vs. Parallel Processing in Neural Network Architectures. *Proceedings of the 38th Annual Meeting of the Cognitive Science Society*. [Contributed Talk]

Musslick S., Shenhav A., Botvinick M.M., Cohen J.D. (2015). A computational model of control allocation based on the Expected Value of Control. *Reinforcement Learning and Decision Making Conference*. [Poster, *selected for spotlight presentation*]

WORKSHOP CONTRIBUTIONS

Musslick S., Dey B., Özcimder K., Patwary M., Willke T. L., Cohen J. D. (2016). Parallel processing capability versus efficiency of representation in neural networks. *15th Neural Computation and Psychology Workshop*. [Contributed Talk]

Musslick S., Cohen J.D. (2015). The computational tradeoff between multiuse and multitasking in neural networks. *NIPS Workshop on Bounded Optimality and Rational Metareasoning*. [Poster]

CONFERENCE ABSTRACTS

Momennejad I., Reverberi C., **Musslick S.**, Cohen J.D., Haynes J.-D. (submitted). The role of task similarity in encoding and executing planned task sequences. *Society for Neuroscience (SfN) Annual Meeting*. [Poster]

Musslick S., Dey B., Özcimder K., Patwary, M., Krieger, P. Willke T. L., Cohen J. D. (2016). Multitasking capacity versus efficiency of representation in neural network architectures. *Society for Neuroscience (SfN) Annual Meeting*. [Contributed Talk]

Musslick S., Shenhav A., Botvinick M.M., Cohen J.D. (2015). A computational model of control allocation based on the Expected Value of Control. *Society for Neuroscience (SfN) Annual Meeting*. [Poster]

Zimmermann U., **Musslick S.**, Ruge H., Goschke T. (2013). The multidimensional nature of flexible task-control. Spring School CRC 940 Volition and Cognitive Control. [Poster]

Teaching

From Molecules to Systems to Behavior (lab). Assistant Instructor. Princeton University, Spring 2016.

Animal Learning and Decision Making: Psychological, Computational and Neural Perspectives (precept). Assistant Instructor. Princeton University, Fall 2015.

Biological Psychology (tutorial seminar). Lecturer. Technische Universität Dresden, Summer 2011, Fall 2011, Fall 2012, Summer 2013. *Received "Karl-und-Charlotte-Bühler-Preis" for excellent teaching.*

Undergraduate Mentoring

Summer 2016 Keith Perkins, Southern University at New Orleans
2016-present Yotam Sagiv, Princeton University
2016-present Penina Krieger, Princeton University
2014-present Aileloreuan Ohiwerei, Princeton University
2014 Franziska Kessler, Technische Universität Dresden

Professional Memberships

2014-present Society for Neuroscience
2016-present Cognitive Science Society

Other Activities

2014-present Member of the Princeton Neuroscience Institute Graduate Student Committee
2011-2012 Board member of the "IG Börse Dresden e.V." (community of interest for stock markets)

Last updated: September 27, 2016