

# 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

### IN PREPARATION

**Musslick S.**, Cohen J.D. (in prep). The computational tradeoff between multiuse and multitasking.

**Musslick S.**, Shenhav A., Botvinick M.M., Cohen J.D. (in prep). A computational model of control allocation based on the Expected Value of Control.

**Musslick S.**, Goschke T., O'Reilly R.C. (in prep). The role of task-feature bindings in cued task switching.

### PEER-REVIEWED CONFERENCE PAPERS

**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: July 30, 2016