Eric L. Denovellis

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RESEARCH INTERESTS

Interactive data visualization, statistical methods for large datasets, prefrontal cortex, cognitive flexibility, task switching, machine learning, computational neuroscience

EDUCATION

Boston University, Boston, Massachusetts USA
Graduate Program for Neuroscience

Ph.D. in Computational Neuroscience, September 2009

Thesis: Task Switching in the Prefrontal Cortex

Advisor: Daniel H. Bullock

University of California, Santa Barbara, Santa Barbara, California USA

B.S., Mathematics and B.A., Philosophy with High Honors, June 2007

ACADEMIC EXPERIENCE

Boston University, Boston, Massachusetts USA

Postdoctoral Researcher **September, 2016 - Present**
Researcher in the Mathematics and Statistics Department. Research focuses on communication between the hippocampus and other brain areas during the reactivation of memory. Involves work in state space modeling, point processes, and signal processing.

Graduate Student **September, 2009 - September, 2016**
Includes doctoral and masters level coursework in mathematics, statistics, computational modeling, and neuroscience as well as research into the neural and computational correlates of task switching.

Teaching Fellow **January, 2014 - May, 2014**
CAS NE 340 - Introduction to Computational Models of Skilled Decision and Action. Gave lecture on Matlab. Assisted in computer lab.

Teaching Fellow **January, 2011 - May, 2011**
CAS CN 570 - Neural and Computational Models of Conditioning, Reinforcement, Motivation and Rhythm. Gave lecture on task switching. Led MATLAB tutorial and designed the course final project.

University of California, Santa Barbara, Santa Barbara, California USA

Campus Learning Assistance Services - Mathematics Tutor **September, 2005 - June, 2007**
Assisted students with mathematics homework for lower level courses.

SERVICE

CELEST Student Organization Co-President **May, 2011 - June, 2016**
In charge of organizing CELEST student events (CELEST is an NSF-funded Science of Learning Center), scheduling the speaker series, Matlab tutorials for CELEST summer program for college students.

Computational Neuroscience Student Organization Treasurer **May, 2010 - March, 2011**
In charge of budgeting funds and reimbursing students.

PUBLICATIONS	Buschman, T.J*., **Denovellis, E.L.***, Diogo, C.*, Bullock, D., and Miller, E.K. (2012). Synchronous Oscillatory Neural Ensembles for Rules in the Prefrontal Cortex. Neuron. *76*, 1–9. *** Co-first authors**
CONFERENCE PROCEEDINGS	**Denovellis, E.L.**, Buschman, T.J., Diogo, C., Bullock, D., and Miller, E.K. Point process models of anterior cingulate and dorsolateral prefrontal cortical neurons during cognitive control. Program No. 599.12. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online. Buschman, T.J., **Denovellis, E.L.**, Diogo, C., Bullock, D., and Miller, E.K. Dynamic, synchronous, sub-networks in prefrontal cortex encode stimulus-response rules. Program No. 599.12. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online. Buschman, T.J., **Denovellis, E.L.** , Diogo, C., Bullock, D., and Miller, E. (2012). Dynamic networks in frontal cortex support the cognitive flexibility to switch between rules. Poster presented at the Computational and systems neuroscience (Cosyne) meeting, Salt Lake City, UT. **Denovellis, E.L.**, Buschman, T.J., Diogo, C., Bullock, D., and Miller, E.K. Rule-based task switching in the anterior cingulate and prefrontal cortex. Program No. 405.18. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011. Online.
TALKS	Better Science Code. Center for Brains, Minds, and Machines. Cambridge, MA May 2017 Data visualization tools: from classroom to science. Inter Science of Learning Centers Conference Workshop. San Diego, CA June 2015 Synchronous Neural Ensembles for Rules in the Prefrontal Cortex. The 5th Annual Dana and Betty Fisher Retreat of the Picower Institute. Red Jacket Resort. South Yarmouth, MA June 2012. Neural Dynamics of Cognitive Flexibility. Fall 2011 Picower Plastic Lunch Series. Massachusetts Institute of Technology. Cambridge, MA October 2011.
PROFESSIONAL EXPERIENCE	**Mercer Advisors**, Santa Barbara, California USA *Pension Consultant I* **October, 2007 - July, 2009** In charge of designing and advising clients on pension plans for three national offices. Carried out statistical analysis of pension plans. Attended conferences to keep abreast of IRS rule changes. Designed a computer program to enhance the efficiency of pension plan design and analysis.
PROFESSIONAL MEMBERSHIPS	*Society for Neuroscience* **May, 2011 - Present**
HONORS AND AWARDS	Phi Beta Kappa, Lambda Chapter
SKILLS	• Statistical Packages: Matlab, R • Languages: Javascript