



CENTER FOR SENSORIMOTOR NEURAL ENGINEERING

Improving lives by connecting brains and technology

January, 2018

Honors and Awards

- Congratulations to **Dr. Joshua Smith** who was named the Milton and Delia Zeuschel Professor for Entrepreneurial Excellence at the University of Washington.
- Congratulations to **Jenny Cronin** (best 1000 words explanation), **David Caldwell** (best regular explanation) and **Gabrielle Gutierrez** (best overall explanation) who won the CSNE Communications Competition. Thanks to **Kaitlyn Casimo** for organizing the event.

Upcoming Seminars, Lectures, Courses, Conferences

- University of Washington students can now enroll in the new **Neural Computation and Engineering minor**. Students who would like to declare the minor should consult with academic advisors in their home major departments or visit the CSNE web site for additional information:
<http://csne-erc.org/education-undergraduate/minor-neural-computation-and-engineering>
- Applications for the **2018 CSNE Hackathon** are due on January 17, 2018 and are now available (<https://www.csnehackathon.org/application>). The Hackathon will take place at the CSNE in Seattle on April 6-9, 2018.
- **Dr. Azadeh Yazdan** will lead the first CSNE “Pomodoro Writing Club” on Monday, January 22, 2018, from 2:00-5:00 pm at the CSNE (1414 NE 42nd St., Seattle, WA). Bring a laptop, a writing project (e.g., a paper, grant application, essay) and your creativity and be ready to write. All CSNE students, post-docs, faculty and staff are welcome to attend.
- **Dr. Eran Klein** will present “Brain-computer Interfaces: Ethical Opportunities and Challenges on January 23, 2108 (5:45-7:30 pm) for the Seattle Community Conversation Series at Kakao Chocolate+Coffee, 415 Westlake Ave N., Seattle, WA. Registration: <https://www.nwabr.org/events-programs/community-events/community-conversation-series/seattle-community-conversation-series>
- Registration is now open for the **2018 Neural Computation and Engineering Connection** (January 18-19, 2018) at the University of Washington: <http://uwin.washington.edu/ncec/>
- Visit the opening of a new shared lab between UW Mechanical Engineering, Electrical Engineering, and Rehabilitation Medicine. The AMP Lab has been designed to support experimental studies of human and robotic movement and performance. The Open House will feature a keynote and demos from current projects, ranging from virtual reality environments for Parkinson's disease to control of legged robotics, with everything in between. The AMP Lab Open House will take place in Wallace Hall on Wednesday, January 24, 2018, with a keynote by Max Donelan (Simon Fraser



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University) at 3:30 pm, followed by lab tours and project demos from 4:30 to 6:30 pm. Open house attendees are asked to RSVP: <http://goo.gl/AykTJd>

- UW P BIO Seminar, Ashok Litwin-Kumar, Ph.D. will present “Randomness and structure in neural representations for learning” on January 16, 2018, 9:30-10:30 am, HSB G-328.
- UW P BIO Seminar, Amy Bastian, Ph.D. will present “Learning and relearning movement” on January 25, 2018, 9:30-10:30 am, HSB G-328.
- UW Graduate Program in Neuroscience Seminar, Flavio Frohlich, Ph.D. will present “Network neuroscience of oscillations in health and disease” on January 29, 2018, 3:30-4:30 pm, HSB, T-747.
- The International BCI Meeting, “BCIs: Not Getting Lost in Translation” will be held on May 21-25, 2018, Asilomar Conference Center, Pacific Grove, CA: <http://bcisociety.org/meetings/bci-2018-welcome/>

New CSNE Publications

- **Weaver, K.E.**, Poliakov, A., Novotny, E.J., **Olson, J.D.**, Grabowski, T.J. and **Ojemann, J.G.**, Electrocorticography and the early maturation of high-frequency suppression within the default mode network, *J. Neurosurg: Pediatrics*, Published online December 1, 2017; DOI: 10.3171/2017.7.PEDS17269.
- **Bjanes, D.A. and Moritz, C.T.**, Automated center-out rodent behavioral trainer (ACRoBaT), an automated device for training rats to perform a modified center out task, *Behav Brain Res.* 2017 Nov 28. pii: S0166-4328(17)31466-3. doi: 10.1016/j.bbr.2017.11.031.
- **Jazayeri, M.**, Zooming out of single neurons reveals structure in mnemonic representations, *Neuron*, 96:1210-1212, 2017.
- Wang, J., Narain, D., Hosseini, E.A., and **Jazayeri, M.**, Flexible timing by temporal scaling of cortical responses, *Nature Neuroscience*, 21: 102–110, 2017.

CSNE in the News

- How the Brain Keeps Time
<http://news.mit.edu/2017/networks-neurons-stretch-compress-control-timing-1204>
- Engineering the Brain, *Columns magazine*, December, 2017, pp. 38-39; online at: <http://magazine.washington.edu/feature/uw-center-for-sensorimotor-neural-engineering/>



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New CSNE Blog Posts

- CSNE community helps UW grad student educate the next generation of neural engineers
<http://csne-erc.org/engage-enable/post/csne-community-helps-uw-grad-student-educate-next-generation-neural-engineers>

Recent Papers of Interest to the CSNE Community

- Mazurek, K.A. and Schieber, M.H., Injecting instructions into premotor cortex, *Neuron*, online 7 December 2017, <https://doi.org/10.1016/j.neuron.2017.11.006>.
- Lindgren, J.T., As above, so below? Towards understanding inverse models in BCI, *J. Neural Engineering*, Volume 15, Number 1, December, 2017.
- Holanda, et al., Robotic assisted gait as a tool for rehabilitation of individuals with spinal cord injury: a systematic review, *Journal of NeuroEngineering and Rehabilitation* 2017, 14:126, <https://doi.org/10.1186/s12984-017-0338-7>

Job Opportunities

- Applications open for 2018 UWIN postdoctoral fellowships in neuroengineering:
<http://uwin.washington.edu/2017/11/06/2018-uwin-postdoctoral-fellowships-neuroengineering/>

Grant Opportunities

- Collaborative Research in Computational Neuroscience (CRCNS) NSF Innovative Approaches to Science and Engineering Research on Brain Function (NOT-MH-18-012):
<https://grants.nih.gov/grants/guide/notice-files/NOT-MH-18-012.html>
- NeuroNEXT Clinical Trials (U01 Clinical Trial Optional)
<https://grants.nih.gov/grants/guide/pa-files/PAR-18-528.html>
- BRAIN Initiative: Targeted BRAIN Circuits Planning Projects - TargetedBCPP
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-18-014.html>
- BRAIN Initiative: Biology and Biophysics of Neural Stimulation
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-18-018.html>
- BRAIN Initiative: Development Optimization, and Validation of Novel Tools and Technologies for Neuroscience Research (STTR)
<https://grants.nih.gov/grants/guide/pa-files/PAR-18-515.html>
- BRAIN Initiative: Development Optimization, and Validation of Novel Tools and Technologies for Neuroscience Research (SBIR)
<https://grants.nih.gov/grants/guide/pa-files/PAR-18-501.html>



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- BRAIN Initiative: Clinical Studies to Advance Next-Generation Invasive Devices for Recording and Modulation in the Human Central Nervous System (UH3 Clinical Trial Required)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-18-023.html>
- BRAIN Initiative: Next-Generation Invasive Devices for Recording and Modulation in the Human Central Nervous System (U44 Clinical Trial Required)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-18-022.html>
- BRAIN Initiative: Next-Generation Invasive Devices for Recording and Modulation in the Human Central Nervous System (UG3/UH3 Clinical Trial Required)
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-18-021.html>

Please send additional news and events items for inclusion in this newsletter to Dr. Eric Chudler (CSNE, Executive Director) at chudler@uw.edu.