



October 9, 2015

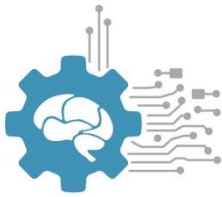
## News and Events

### Upcoming Seminars and Lectures

- CSNE Kavli Seminar: Dr. Nick Donaldson, Professor of Neuroprosthesis Engineering, Dept of Medical Physics & Biomedical Engineering, University College London will present "*The Protection of Implanted Electronics*" on Monday, October 26, 2015; 3:00-4:00 pm; CSNE, 1414 NE 42<sup>nd</sup> St., Suite 204, Seattle, WA
- UW Institute for Neuroengineering presents: Dr. Kat Steele, Assistant Professor, Department of Mechanical Engineering, University of Washington. "*Synergies and Simulation: Quantifying altered neuromuscular control after brain injury*" on Wednesday, October 14, 2015; 3:30pm; Univ. Washington Health Sciences Building K-069
- UW Institute for Neuroengineering presents: Dr. Dylan Muir, Postdoctoral Fellow, Mrcic-Flogel Lab, University of Basel. "*Probing the computational architecture of visual cortex with complex stimuli*" Thursday, October 15, 3:30pm, University of Washington Health Sciences Building G-417
- Brainhack is a unique conference that convenes researchers from across the globe and from a myriad of disciplines to work together on innovative projects related to neuroscience. Brainhack Americas will unite several regional Brainhack events throughout North, Central, and South America during October 23, 24 & 25, 2015. Local events will be connected by videoconference to expand collaborative opportunities so that smaller sites can plug into the content and energy generated at larger sites. The Seattle site of Brainhack Americas will be hosted by the UW eScience institute on October 24th and 25th. The event will take place at the WRF Data Science Studio, on the 6th floor of the Physics/Astronomy tower. A tentative schedule for the event is posted here: <http://tinyurl.com/brainhack-amx-schedule>. To sign up, please fill out the form here: <http://tinyurl.com/brainhack-americas-seattle>
- Dr. Tadayoshi Kohno, Professor, Department of Computer Science & Engineering, University of Washington; Dr. Batya Friedman, Professor, Information School, University of Washington; Dr. Ryan Calo, Assistant Professor, University of Washington School of Law: Panel discussion: "*Responsible innovation: A cross-disciplinary lens on privacy and security challenges*" Tuesday, November 3, 7:30pm, Kane 130. More information and free but required registration at: <http://engage.washington.edu/site/Calendar?id=126981&view=Detail>

### New CSNE Publications

- Milovanovica, I., Robinson, R., Fetz, E.E. and Moritz, C.T., Simultaneous and independent control of a brain-computer interface and contralateral limb movement, *Brain-Computer Interfaces*, 2015, <http://dx.doi.org/10.1080/2326263X.2015.1080961>.
- Stocco, A., Prat, C.S., Losey, D.M., Cronin, J.A., Wu, J., Abernethy, J.A. and Rao, R.P.N., Playing 20 Questions with the Mind: Collaborative Problem Solving by Humans Using a Brain-to-Brain Interface. *PLoS ONE* 10(9): e0137303. doi:10.1371/journal.pone.0137303, 2015.



## **CSNE in the News**

- MultiModal Health redefines therapy through video games:  
[http://www.dailyuw.com/wellness/article\\_9ca14666-689d-11e5-9332-976b26f011e9.html](http://www.dailyuw.com/wellness/article_9ca14666-689d-11e5-9332-976b26f011e9.html)

## **CSNE Presentations at the 2015 Annual Society for Neuroscience Meeting**

(Chicago, IL; October 16-21, 2015)

- Two modalities of adaptive deep brain stimulation in Parkinson's disease patients implemented using the Aactiva® PC+S investigational neurostimulator and Nexus-D System Interface. \*A. VELISAR, J. A. HERRON, Z. BLUMENFELD, E. J. QUINN, M. H. TRAGER, H. J. CHIZECK, H. BRONTE-STEWART
- Multimodal interrogation of brain circuits with thermally drawn flexible neural probes. \*A. CANALES, X. JIA, U. P. FRORIEP, R. A. KOPPE, C. M. TRINGIDES, J. SELVIDGE, Y. FINK, P. ANIKEEVA
- Wireless magnetothermal deep brain stimulation. \*R. CHEN, G. ROMERO, M. G. CHRISTIANSEN, A. MOHR, P. ANIKEEVA
- Bloomin' Brains: A summer neuroscience camp for middle school students. \*E. H. CHUDLER, K. M. STRAUS
- Task specific sensory feedback via cortical stimulation in humans. J. A. CRONIN, K. L. COLLINS, D. SARMA, M. E. D'ASARO, J. H. LANG, R. P. N. RAO, J. G. OJEMANN, \*J. D. OLSON
- Inducing ownership of an artificial limb through direct cortical stimulation in humans K. L. COLLINS, A. GUTERSTAM, J. A. CRONIN, J. D. OLSON, H. H. EHRSSON, \*J. G. OJEMANN
- Dynamic iterative brain-computer interface for dexterous hand movements. \*J. WU, N. R. WILSON, D. SARMA, V. KUMAR, T. M. BLAKELY, F. DARVAS, B. W. BRUNTON, J. G. OJEMANN, R. P. N. RAO
- Concurrent independent brain-computer interface and movement control from the same cortical site. \*L. BASHFORD, J. WU, D. SARMA, K. COLLINS, J. OJEMANN, C. MEHRING
- Changes in functional connectivity due to brain-computer interface learning. K. CASIMO, \*K. E. WEAVER, J. D. WANDER, A. KO, J. G. OJEMANN, F. DARVAS
- Default mode network electrocorticographic brain-computer interface. \*D. J. CALDWELL, J. D. WANDER, K. E. WEAVER, D. SARMA, J. D. OLSON, L. A. JOHNSON, R. P. N. RAO, J. G. OJEMANN
- Multimodal neural decoding with natural data. N. X. R. WANG, J. OLSON, B. BRUNTON, A. FARHADI, J. G. OJEMANN, \*R. P. RAO



## CENTER FOR SENSORIMOTOR NEURAL ENGINEERING

*Improving lives by connecting brains and technology*

- Effect of sleep-related cortical stimulation on learning a BCI task. \*I. REMBADO, S. ZANOS, E. FETZ
- Paired stimulation induces spike-timing dependent plasticity of neural connections in primate sensorimotor cortex. \*S. SEEMAN, B. J. MOGEN, E. E. FETZ, S. I. PERLMUTTER
- Electrical cortical stimulation paired with volitional movement produces subsequent intra- and inter-hemispheric effects in the nonhuman primate. \*A. R. BOGAARD, S. ZANOS, A. G. RICHARDSON, E. E. FETZ
- Changes in post-synaptic efficacy of primate corticospinal cells is associated with compensatory changes in firing patterns. Y. NISHIMURA, S. I. PERLMUTTER, R. W. EATON, \*E. E. FETZ

### **Recent Papers of Interest to the CSNE Community**

- Cusack WF, Thach S, Patterson R, Acker D, Kistenberg RS, Wheaton LA. Enhanced Neurobehavioral Outcomes of Action Observation Prosthesis Training. *Neurorehabil Neural Repair*. 2015 Oct 5. pii: 1545968315606992.
- Agorelius, J., Tsanakalis, F., Friberg, A, Thorbergsson, PT and Schouenborg, J. An array of highly flexible electrodes with a tailored configuration locked by gelatin during implantation—initial evaluation in cortex cerebri of awake rats. *Front. Neurosci.*, 25 September 2015 | <http://dx.doi.org/10.3389/fnins.2015.00331>
- Chong Xie, Jia Liu, Tian-Ming Fu, Xiaochuan Dai, Wei Zhou. & Charles M. Lieber. Three-dimensional macroporous nanoelectronic networks as minimally invasive brain probes *Nature Materials* (2015) doi:10.1038/nmat4427, Published online 05 October 2015

### **Grant Opportunities**

- BRAIN Initiative: Theories, Models and Methods for Analysis of Complex Data from the Brain (R01) <http://grants.nih.gov/grants/guide/rfa-files/RFA-EB-15-006.html>): NIH will be hosting a second informational conference call on October 13, 2015 at 2pm EST. To receive the call-in information, please RSVP to [BRAINTheoriesFOA@mail.nih.gov](mailto:BRAINTheoriesFOA@mail.nih.gov).
- The Brain Research Foundation is a public, nonprofit, charitable organization dedicated to making a positive difference in the lives of children, adolescents, and adults who are touched by neurological disorders. <http://thebrf.org/Sub+Pages/Funding+Opportunities>

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