



## CENTER FOR SENSORIMOTOR NEURAL ENGINEERING

*Improving lives by connecting brains and technology*

**July, 2017**

### **Honors and Awards**

- Congratulations to CSNE Executive Director/Education Director **Dr. Eric Chudler** for receiving a Northwest Regional Emmy Award for his television program “BrainWorks: Exercise and the Brain”:  
<http://www.csne-erc.org/news/story/csne-executive-director-wins-emmy-award>
- **Dr. Rajesh Rao** (CSNE Director) has been named the Cherng Jia and Elizabeth Yun Hwang Endowed Professor in the University of Washington’s (UW’s) Department of Electrical Engineering:  
<http://www.csne-erc.org/news/story/csne-director-receives-hwang-endowed-professorship-uw>
- The **CSNE**, UW Mechanical Engineering, College of Engineering story /ME/CoE Immersion Story, “Helping the Body Heal, Feel and Move Again” (<http://www.washington.edu/boundless/inclusive-engineering/>) won a Council for Advancement and Support of Education (CASE) gold award.

### **Upcoming Seminars, Lectures, Courses, Conferences**

- CSNE End-User Practitioner Round Table with Dr. Jeff Ojemann, Tuesday, July 11, 2017, 1:30-2:30 pm, 1414 NE 42<sup>nd</sup> St., Suite 204, Seattle, WA. (RSVP required)
- CSNE End-User Practitioner Round Table with Austin Beatty, Monday, July 24, 2017, 9:30-10:30 pm, 1414 NE 42<sup>nd</sup> St., Suite 204, Seattle, WA. (RSVP required)

### **New CSNE Publications**

- **Klein, E. and Pratt, K.**, Helping or hacking? Engineers and ethicists must work together on brain-computer interface technology, *The Conversation*, June 13, 2017  
<http://theconversation.com/helping-or-hacking-engineers-and-ethicists-must-work-together-on-brain-computer-interface-technology-77759>
- **Goering, S., Klein, E., Dougherty, D.D. and Widge, A.S.**, Staying in the Loop: Relational Agency and Identity in Next-Generation DBS for Psychiatry, *AJOB Neuroscience*, 8:2, 59-70, 2017.
- **Sullivan, L.S., Klein, E., Brown, T., Sample, M., Pham, M., Tubig, P., Folland, R., Truitt, A. and Goering, S.**, Keeping disability in mind: A case study in implantable brain-computer interface research. *Sci Eng Ethics*. 2017, doi: 10.1007/s11948-017-9928-9. Help, hope, and hype: Ethical dimensions of neuroprosthetics
- Clausen, J., **Fetz, E.**, Donoghue, J., Ushiba, J., Spörhase, U., Chandler, J., Birbaumer, N and Soekadar, S.R., Help, hope, and hype: Ethical dimensions of neuroprosthetics, *Science*, 356:1338-1339, 2017.



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### CSNE in the News

- Graduate students Katherine Pratt and the Tim Brown participated in Awesome Con D.C. 2017 (<http://awesome-con.com/>) on the panel "The Human-Technology Frontier: To Enhancement and Beyond?" Also see: <http://www.csne-erc.org/news/story/csne-members-participate-nsf-awesome-con-future-con>
- Oh, the Humanity: What Will Tech Upgrades Do to People?  
<https://www.livescience.com/59535-human-machine-interface-future.html>
- When Cutting-Edge Science Meets Science Fiction, It Packs the House  
Read  
<http://www.smithsonianmag.com/innovation/when-cutting-edge-science-meets-science-fiction-it-packs-house-180963774/>
- Beyond the Five Senses  
<https://www.theatlantic.com/magazine/archive/2017/07/beyond-the-five-senses/528699/>
- Brain signals deliver first targeted treatment for world's most common movement disorder  
<http://www.washington.edu/news/2017/06/27/brain-signals-deliver-first-targeted-treatment-for-worlds-most-common-movement-disorder/>

### New CSNE Blog Posts

- Ethics as a cornerstone of neural engineering research  
<http://www.csne-erc.org/engage-enable/post/ethics-cornerstone-neural-engineering-research>

### Recent Papers of Interest to the CSNE Community

- Srinivasan, S.S., Carty, M.J., Calvaresi, P.W., Clites, T.R., Maimon, B.E., Taylor, C.R., Zorzos, A.N. and Herr, H., On prosthetic control: A regenerative agonist-antagonist myoneural interface, *Science Robotics*, DOI: 10.1126/scirobotics.aan2971, 2017.
- Nardone, R., Langthaler, P.B., Orioli, A., Höller, P. Höller, Y., Frey, V.N., Brigo, F. and Trinka, E., Effects of intermittent theta burst stimulation on spasticity after spinal cord injury, *Restorative Neurology and Neuroscience*, 35:287-294, 2017.
- Long, J., Federico, P. and Perez, M.A., A novel cortical target to enhance hand motor output in humans with spinal cord injury. *Brain*, 2017; 140 (6): 1619 DOI: 10.1093/brain/awx102.
- Broccard, F.D., Joshi, S., Wang, J. and Cauwenberghs, G., Neuromorphic neural interfaces: from neurophysiological inspiration to biohybrid coupling with nervous systems, *Journal of Neural Engineering*, Volume 14, Number 4.



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- Schroeder, K.E., Irwin, Z.T., Bullard, A.J., Thompson, D.E., Bentley, J.N., Stacey, W.C., Patil, P.G. and Chestek, C.A., Robust tactile sensory responses in finger area of primate motor cortex relevant to prosthetic control. *Journal of Neural Engineering*, Volume 14, Number 4.

### **Grant Opportunities**

- BRAIN Initiative: Standards to Define Experiments Related to the BRAIN Initiative (R24)  
<https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-17-256.html>
- BRAIN Initiative: Non-Invasive Neuromodulation - Mechanisms and Dose/Response Relationships for Targeted CNS Effects (R01)  
<https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-17-245.html>
- BRAIN Initiative: New Technologies and Novel Approaches for Large-Scale Recording and Modulation in the Nervous System (U01)  
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-17-003.html>
- BRAIN Initiative: Optimization of Transformative Technologies for Large Scale Recording and Modulation in the Nervous System (U01)  
<https://grants.nih.gov/grants/guide/rfa-files/RFA-NS-17-004.html>

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).