



CENTER FOR SENSORIMOTOR NEURAL ENGINEERING

Improving lives by connecting brains and technology

July, 2016

Awards and Honors

- Congratulations to **Chet Moritz, Josh Smith and Polina Anikeeva** for leading an international team to a \$1M prize in the GlaxoSmithKline Bioelectronics Innovation Challenge (<http://www.washington.edu/news/2016/06/21/uw-led-team-awarded-1m-bioelectronics-innovation-prize/>).
- **Stephanie Seeman** (Graduate Program in Neuroscience, University of Washington; Advisor: Steve Perlmutter) successfully defended her Ph.D. dissertation titled "Spike-timing dependent plasticity and connectivity in primate sensori-motor cortex."
- **Nile Wilson** (graduate student, UW Department of Bioengineering; Advisors: Jeff Ojemann and Raj Rao) successfully passed her qualifying examination.

Upcoming Seminars, Lectures, Courses, Conferences

- Summer Institute in Statistics for Big Data, sponsored by the UW Department of Biostatistics, July 11-29, 2016 (<http://www.biostat.washington.edu/suminst/sisbid>).

New CSNE Publications

- **Moritz, C.T., Ruther, P., Goering, S., Stett, A., Ball, T., Burgard, W., Chudler, E.H. and Rao, R.P.N.**, New Perspectives on Neuroengineering and Neurotechnologies: NSF-DFG Workshop Report, IEEE Transactions on Biomedical Engineering, 7:1354-1367, 2016.
- **Thompson, M.C., Herron, J.A., Brown, T., Ojemann, J.G., Ko, A.L., and Chizeck, H.J.**, Demonstration of a stable chronic electrocorticography-based brain-computer interface using a deep brain stimulator. Intl. Conf. On Systems, Man, And Cybernetics, Budapest, Hungary, Oct. 9-12, 2016
- **Klein, E. and Ojemann, J.**, Informed consent in implantable BCI research: identification of research risks and recommendations for development of best practices, June 1, 2016, J. Neural Eng., 13:4.
- **Wu, J., Shuman, B.R., Brunton, B.W., Steele, K.M., Olson, J.D., Rao, R.P.N., and Ojemann, J.G.**, Multistep model for predicting upper-limb 3D isometric force application from pre-movement electrocorticographic features, 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2016, arXiv:1605.05291 [q-bio.NC].
- **Ojemann, J.**, Editorial: Noninvasive biomarkers: are we there yet?, J. Neurosurg. Pediatr., 17:1-3, 2016.
- **DO-IT**, Increasing the participation of people with disabilities in Engineering Research Centers, Proceedings of the February 2016 AccessERC Capacity Building Institute (CBI); online at:



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http://www.washington.edu/doi/sites/default/files/atoms/files/AccessERC_Proceedings_2016_0.pdf

CSNE in the News

- **Team led by UW researchers** reaches the finals of the GSK Bioelectronics Innovation Challenge (<https://news.cs.washington.edu/2016/06/22/team-led-by-uw-researchers-reaches-the-finals-of-the-gsk-bioelectronics-innovation-challenge/>)
- **Burgstahler, S. and Bellman, S.**, Promising Practices That Engage People with Disabilities in the CSNE
<http://www.washington.edu/doi/promising-practices-engage-people-disabilities-csne>

New CSNE Blog Posts

- The CSNE welcomes **new team members**:
<http://www.csne-erc.org/engage-enable/post/csne-welcomes-new-team-members>
- Informed consent in **implantable brain-computer interface** research:
<http://www.csne-erc.org/engage-enable/post/informed-consent-implantable-brain-computer-interface-research>

Recent Papers of Interest to the CSNE Community

- Perruchoud, D., Pisotta, I., Carda, S., Murray, M.M. and Ionta, S., Biomimetic rehabilitation engineering: the importance of somatosensory feedback for brain-machine interfaces, *J. Neural Eng.*, Volume 13, Number 4
- Alam, M., Rodrigues, W., Pham, B.N. and Thakor, N.V., Brain Machine Interface-facilitated Neurorehabilitation via Spinal Stimulation after Spinal Cord Injury: Recent Progress and Future Perspectives. *Brain Res.* 2016 May 20. pii: S0006-8993(16)30401-2. doi: 10.1016/j.brainres.2016.05.039.
- Zhan, L., Guiraud, D., Andreu, D., Benoussaad, M., Fattal, C. and Hayashibe, M., Real-time estimation of FES-induced joint torque with evoked EMG. Application to spinal cord injured patients *Journal of NeuroEngineering and Rehabilitation*, 2016, 13:60 DOI 10.1186/s12984-016-0169-y
- Koutsou, A.D., Moreno, J.C., del Ama, A.J., Rocon, E. and Pons, J.L., Advances in selective activation of muscles for non-invasive motor neuroprostheses, *Journal of NeuroEngineering and Rehabilitation*, 2016, 13:56, DOI: 10.1186/s12984-016-0165-2

Grant Opportunities

- Whitehall Foundation
<http://www.whitehall.org/about/>



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- Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship (Parent F31)
<http://grants.nih.gov/grants/guide/pa-files/PA-16-309.html>
- Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31 - Diversity)
<http://grants.nih.gov/grants/guide/pa-files/PA-16-308.html>
- Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32)
<http://grants.nih.gov/grants/guide/pa-files/PA-16-307.html>
- Ruth L. Kirschstein National Research Service Award (NRSA) Individual Senior Fellowship (Parent F33)
<http://grants.nih.gov/grants/guide/pa-files/PA-16-310.html>
- PHS 2016-02 Omnibus Solicitation of the NIH for Small Business Technology Transfer Grant Applications (Parent STTR [R41/R42])
<http://grants.nih.gov/grants/guide/pa-files/PA-16-303.html>
- PHS 2016-02 Omnibus Solicitation of the NIH, CDC, FDA, and ACF for Small Business Innovation Research Grant Applications (Parent SBIR [R43/R44])
<http://grants.nih.gov/grants/guide/pa-files/PA-16-302.html>

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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.