February, 2016

Awards

- **CSNE Graduate Student/Post-doc Travel Award** and **CSNE International Exchange Program** applications are now being accepted; application materials are due on March 1, 2016. Contact Eric Chudler (chudler@uw.edu) for application forms.

- Applications are being accepted for the **2016 University of Washington Institute of Neuroengineering (UWIN)-funded undergraduate and post-baccalaureate fellows**. These fellowships provide up to $6,000, and can be used either for summer work or work during the academic quarters. Applications are due on Friday, March 4, 2016. More information can be found at:
  - http://uwin.washington.edu/students/undergraduate-students/apply/
  - http://uwin.washington.edu/students/post-bacs/apply/

Upcoming Seminars, Lectures, Courses, Conferences

- Conference: Save the Date -- The **CSNE Ethics Thrust will host a day-long workshop** on The Presidential Commission for the Study of Bioethical Issues Gray Matters recommendations for neuroscience and ethics engagement on November 4, 2016 at the CSNE. The workshop will bring together renowned experts at the intersection of ethics, neuroscience, and policy with CSNE faculty and students. This workshop will have the dual purpose of educating the CSNE on the Gray Matters recommendations and provide an opportunity to discuss and debate the CSNE model of ethics engagement. For more information about this workshop, please contact Eran Klein kleineuw@u.washington.edu or Sara Goering sgoering@u.washington.edu.

- Conference: The **9th World Congress for NeuroRehabilitation**: May 10-13, 2016, Philadelphia, PA
  http://wcnr2016.org/

- Conference: **BCI Meeting 2016**: May 30 -June 3, 2016, Pacific Grove, CA
  http://bcisociety.org/meetings/bci-meeting-2016-welcome/

- Conference: **IFESS 2016 - International Functional Electrical Stimulation Society**: June 8-10, 2016, La Grande-Motte, France
  http://ifess.org/Conferences

- Conference: **Neuro Rehab 2016**: June 15-16, 2016, London, UK
  http://www.neurorehabexpo.co.uk/

- Short Course: The National Center for Adaptive Neurotechnologies (Albany, NY) is now accepting applications for the first **Summer School in Adaptive Neurotechnologies** (three-week short course, NIH-funded). The 24 successful applicants will receive full support for tuition, room and board, and a stipend for travel. More information and application instructions: www.neurotechcenter.org/SummerCourse2016.

- Seminar: **Shawn Lockery** (Professor, Institute of Neuroscience & Department of Biology, Univ Oregon) will present "To model the connectome, or not? A case study in C. elegans": Monday, February 1, 12:00 pm, UW HCK Room 132.

- Seminar: **Emily Fox** (Amazon Professor of Machine Learning, Assistant Professor in Statistics, Univ Washington) will present "Automatically Parsing Intracranial EEG using Bayesian Nonparametric Dynamic Models": Wednesday, February 3, 12:15 pm, at the CSNE, Suite 204, 1414 NE 42nd St., Seattle, WA.

- Seminar: **Wyeth Bair** (Assistant Professor, Department of Biological Structure, Univ Washington) will present "Modeling mid-level visual representations of shape and motion": Monday, February 8, 3:30 pm, UW HSB T-747

- Seminar: **Jason Yeatman** (Assistant Professor, Institute for Learning & Brain Sciences, Department of Speech & Hearing Sciences, Univ Washington) will present "The neural circuitry of reading": Wednesday, February 10, 3:30 pm, UW Room PAA-A110.

- Seminar: **Jonathan Demb** (Associate Professor of Ophthalmology and Visual Science & Cellular and Molecular Physiology, Yale Univ) will present "Synaptic mechanisms for visual computation in retinal circuitry": Friday, February 12, 4:00 pm, UW HSB RR-134.

- Seminar: **Azadeh Yazdan-Shahmorad** (Postdoctoral Scholar, Univ California, San Francisco) will present "A Large Scale Interface for Optogenetics in Non- human Primates with Application to Sensorimotor Cortical Plasticity": Thursday, March 10, 12:30 pm, UW Foege Room N130.

New CSNE Publications

- Koppes, R.A., Park, S., Hood, T., Jia, X., Poorheravi, N.A., Achyuta, A.H., Fink, Y. and **Anikeeva, P.,** Thermally drawn fibers as nerve guidance scaffolds, Biomaterials, 81:27-35, 2016.

- **Vomero, M., van Niekerk, P.,** Nguyen, V., Gong, N., **Hirabayashi, M**., Cinopri, A., Logan, K., Moghadasi, A., Varma, P. and **Kassegne, S.,** A novel pattern transfer technique for mounting glassy carbon microelectrodes on polymeric flexible substrates, J Micromechanics and Microengineering, Vol 26(2), 2016.

- **Kassegne, S., Vomero, M., van Niekerk and Hirabayashi, M**., Glassy carbon microelectrodes for neural signal sensing and stimulation, in Carbon: The Next Silicon. Book 2-Applications, edited by M.J. Madou, V.H. Perez-Gonzalez and B. Pramanick, New York: Momentum Press, LLC., pages 101-122, 2016.

- Miller, K.J., Schalk, G., Hermes, D., **Ojemann, J.G. and Rao, R.P.N.,** Near-instantaneous classification of perceptual states from cortical surface recordings, in Brain-Computer Interface Research. A State-of-the-Art Summary, edited by C. Guger, G. Müller-Putz, B. Allison, New York: Springer, pp. 105-114, 2015.
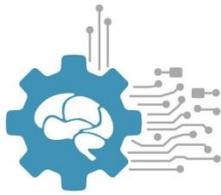
- Chen, R., Christiansen, M.G., Sourakov, A., Mohr, A., Matsumoto, Y., Okada, S., Jasanoff, A. and **Anikeeva, P**., High-performance ferrite nanoparticles through nonaqueous redox phase tuning, Nano Lett., 2016 Jan 13.

- Lee, G., **Waters, B.H.,** Shin, Y.G., **Smith, J.R.** and Park, W.S., A reconfigurable resonant coil for range adaptation wireless power transfer, IEEE Transactions on Microwave Theory and Techniques, PP(99):1-9, 2016.

- Zylberberg, J,, Cafarom J,, Turner, M.H,, **Shea-Brown, E and Rieke F.,** Direction-selective circuits shape noise to ensure a precise population code, Neuron, 89:369-383, 2016.

- Malekmohammadi, M., **Herron, J.,** Velisar, A., Blumenfeld, Z.,Trager, M.H., **Chizeck, H.J.** and Bronte-Stewart, H., Kinematic adaptive Deep Brain Stimulation for resting tremor in Parkinson's disease, Movement Disorders, 2016 Jan 27. doi: 10.1002/mds.26482.

CSNE in the News

- "In RET program, teachers turn summers into science," CSNE Engage & Enable, January 20, 2016: http://csne-erc.org/engage-enable/post/ret-program-teachers-turn-summers-science

Recent Papers of Interest to the CSNE Community

- Scholvin, J., Kinney, J.P., Bernstein, J.G., Moore-Kochlacs, C., Kopell, N., Fonstad and C.G., Boyden, E.S., Close-packed silicon microelectrodes for scalable spatially oversampled neural recording, *IEEE Transactions on Biomedical Engineering,* 63:120-130, 2016, doi: 10.1109/TBME.2015.2406113.

- Kiourti, A., Lee, C.W.L., Chae, J. and Volakis, J.L., A wireless fully passive neural recording device for unobtrusive neuropotential monitoring, *IEEE Transactions on Biomedical Engineering,* 63:131-137, 2016, doi: 10.1109/TBME.2015.2458583.

- Lee, S.M., Kim, J.H., Park, C., Hwang, J., Hong, J.S., Lee, K.H. and Lee, S.H., Self-adhesive and capacitive carbon nanotube-based electrode to record electroencephalograph signals from the hairy scalp, IEEE Transactions on Biomedical Engineering, 63:138-147, 2016 doi: 10.1109/TBME.2015.2478406.

- Schiefer, M., Tan, D., Sidek, S.M. and Tyler, D.J., Sensory feedback by peripheral nerve stimulation improves task performance in individuals with upper limb loss using a myoelectric prosthesis, J. Neural Eng. 13 (2016) 016001 (13pp) doi:10.1088/1741-2560/13/1/016001.

- Li, C., Narayan, R.K., Wu, P.M., Rajan, N., Wu, Z., Mehan, N., Golanov, E.V., Ahn, C.H. and Hartings, J.A., Evaluation of microelectrode materials for direct-current electrocorticography, J. Neural Eng. 13 (2016) 016008 (10pp) doi:10.1088/1741-2560/13/1/016008.
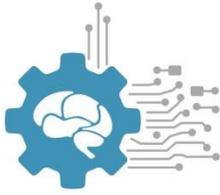
- Sachs, N.A., Ruiz-Torres, R., Perreault, E.J. and Miller, L.E., Brain-state classification and a dual-state decoder dramatically improve the control of cursor movement through a brain-machine interface, J. Neural Eng. 13 (2016) 016009 (12pp) doi:10.1088/1741-2560/13/1/016009

- Malaga, K.A., Schroeder, K.E., Patel, P.R., Irwin, Z.T., Thompson, D.E., Bentley, J.N., Lempka, S.F., Chestek, C.A. and Patil, P.G., Data-driven model comparing the effects of glial scarring and interface interactions on chronic neural recordings in non-human primates, J. Neural Eng. 13 (2016) 016010 (14pp) doi:10.1088/1741-2560/13/1/016010

Grant Opportunities

- NIH Pathway to Independence Award (Parent K99/R00)
  http://grants.nih.gov/grants/guide/pa-files/PA-16-077.html

- Energy-Efficient Computing: from Devices to Architectures
  http://www.nsf.gov/pubs/2016/nsf16526/nsf16526.htm

- NIH Blueprint Training in Computational Neuroscience: From Biology to Model and Back Again (T90/R90)
  http://grants.nih.gov/grants/guide/rfa-files/RFA-DA-16-009.html

- International Bioethics Research Training Program (D43)
  http://grants.nih.gov/grants/guide/pa-files/PAR-16-082.html

- International Research Ethics Education and Curriculum Development Award (R25)
  http://grants.nih.gov/grants/guide/pa-files/PAR-16-081.html

- NSF Cognitive Neuroscience
  http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5316&WT.mc_id=USNSF_39&WT.mc_ev=click

- National Science Foundation Research Traineeship Program
  http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505015&WT.mc_id=USNSF_39&WT.mc_ev=click

- Spring 2016 UW Royalty Research Fund (RRF): Proposals are due on March 7, 2016.
  http://www.washington.edu/research/?page=rrf

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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.