CENTER FOR SENSORIMOTOR NEURAL ENGINEERING

Improving lives by connecting brains and technology

December, 2017

Honors and Awards

- **Dr. Frederic Gilbert** was selected to receive a full-travel award to attend the Azrieli Program in Brain, Mind, and Consciousness at the Canadian Institute for Advanced Research (Montebello, Québec, Canada, December 6-11, 2017).

Upcoming Seminars, Lectures, Courses, Conferences

- UW Graduate Program in Neuroscience Seminar: Dr. Bruce Carlson (Associate Professor, Department of Biology, Washington University) will present "Linking evolutionary change in sensory perception to its cellular and network substrates in weakly electric fish," Monday, December 4, 2017, 3:30-4:30 pm, UW HSB T-639.

- UW Computation Neuroscience Seminars: Alex Dimitrov, Washington State University (December 6, 2017) and Eva Dyer, Northwestern University (December 20, 2017); both seminars at 9:30-10:30 am in Lewis Hall 208.

- Allen Institute Showcase Symposium 2017, December 13-14, 2017: https://www.alleninstitute.org/events-training/showcase-symposium-2017/

- CSNE Co-Director **Dr. Chet Moritz** will present a seminar titled "Neural devices to improve hand and arm function after brain and spinal cord injury" at UC Santa Cruz on December 1, 2017, in Engineering 2, Room 180, 12:00-1:00 pm.

New CSNE Publications

- Yuste, R., **Goering, S.**, Arcas, B.A.Y., Bi, G., **Carmena, J.M.**, Carter, A., Fins, J.J., Friesen, P., Gallant, J., Huggins, J.E., **Illes, J.**, Kellmeyer, P., **Klein, E.**, Marblestone, A., Mitchell, C., Parens, E., **Pham, M.**, Rubel, A., Sadato, N., **Sullivan, L.S.**, Teicher, M., Wasserman, D., Wexler, A., Whittaker, M. and Wolpaw, J., Four ethical priorities for neurotechnologies and AI, Nature, 551:159-163, 2017.

- Vomero, M., Castagnola, E., Ordonez, J.S., Carli, S., Zucchini, E., Maggiolini, E., Gueli, C., Goshi, N., Ciarpella, F., Cea, C., Fadiga, L., Ricci, D., **Kassegne, S**., and Stieglitz, T., Incorporation of silicon carbide and diamond-like carbon as adhesion promoters improves in vitro and in vivo stability of thin-film glassy carbon electrocorticography arrays, Adv. Biosys. 2017, https://doi.org/10.1002/adbi.201700081.

- **Casimo, K.,** Levinson, L.H., **Zanos, S**., Gkogkidis, C.A., Ball, T**., Fetz, E., Weaver, K.E. and Ojemann, J.G**., An interspecies comparative study of invasive electrophysiological functional connectivity. Brain Behav. 2017;e00863. https://doi.org/10.1002/brb3.863.

CSNE in the News

- Researchers grapple with the ethics of testing brain implants
http://www.sciencemag.org/news/2017/10/researchers-grapple-ethics-testing-brain-implants

- From maintaining ship machines to restoring limb function
http://newscenter.sdsu.edu/sdsu_newscenter/news_story.aspx?sid=77012

- How much can machines tell us about the brain?
http://2ser.com/much-can-machines-tell-us-brain/

- Scientists, Could you Explain Your Research to Kids?
http://depts.washington.edu/mbwc/news/article/talking-to-kids-about-brain-science

New CSNE Blog Posts

- UW grad student makes neural engineering understandable and accessible
http://csne-erc.org/engage-enable/post/uw-grad-student-makes-neural-engineering-understandable-and-accessible

Recent Papers of Interest to the CSNE Community

- Balasubramanian, K., Vaidya, M., Southerland, J., Badreldin, I., Eleryan, A., Takahashi, K., Qian, K., Slutzky, M.W., Fagg, A.H., Oweiss, K., and Hatsopoulos, N.G., Changes in cortical network connectivity with long-term brain-machine interface exposure after chronic amputation. Nature Communications, 2017; 8 (1) DOI: 10.1038/s41467-017-01909-2.

- Irwin, Z.T., Schroeder, K.E., Vu, P.P., Bullard, A.J., Tat, D.M., Nu, C.S., Vaskov, A., Nason, S.R., Thompson, D.E., Bentley, J.N., Patil, P.G. and Chestek, C.A., Neural control of finger movement via intracortical brain–machine interface, Journal of Neural Engineering, Volume 14, Number 6, 2017.

- Even-Chen, N., Stavisky, S.D., Kao, J.C., Ryu, S.I. and Shenoy, K.V., Augmenting intracortical brain-machine interface with neurally driven error detectors, Journal of Neural Engineering, Volume 14, Number 6, 2017.

Grant Opportunities

- McKnight Scholar Awards
https://www.neuroscience.mcknight.org//newsroom/upcoming-deadlines/deadline-2018-mcknight-scholar-awards

- Christopher & Dana Reeve Foundation Grants; applications open January 2018
  https://www.christopherreeve.org/get-support/grants-for-non-profits

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