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**NEUROTECHNOLOGY**

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Member Publications  
October 2011 – September 2018

■ Publications supported directly by CNT funding

## Amir Alimohammad

2017

- Hennessy, A. and Alimohammad, A. (2017). Design and Implementation of a Digital Secure Code-Shifted Reference UWB Transmitter and Receiver. *IEEE Transactions on Circuits and Systems I: Regular Papers*, 64(7), 1927-1936.

2018

- Korat, U., & Alimohammad, A. (2018). *A Reconfigurable Hardware Architecture for Principal Component Analysis*. *Circuits, Systems, and Signal Processing*, Springer.
- Bhagat, N., Valencia, D., Alimohammad, A., & Harris, F. (2018). High-throughput and compact FFT architectures using the Good-Thomas and Winograd algorithms. *IET Communications*, 12(8), 1011-1018.
- Shinde, V., Kumar, G. J., Valencia, D., & Alimohammad, A. (2018). High-Throughput and Compact Reconfigurable Architectures for Recursive Filters. *IET Communications*, 12(13), 1616-1623.

## Richard Andersen

2017

- Zhang, C.Y., Aflalo, T., Revechkis, B., Rosario, E.R., Ouellette, D., Pouratian, N. and Andersen, R.A., Partially mixed selectivity in human posterior parietal association cortex, *Neuron*, 95:697-708, 2017.

2018

- Armenta Salas, M., Bashford, L. Kellis, S., Jafari, M., Jo, H., Kramer, D., Shanfield, K., Pejisa, K., Lee, B., Liu, C.Y., Andersen, R.A. and Romo, R., Proprioceptive and cutaneous sensations in humans elicited by intracortical microstimulation, *eLife* 2018;7:e32904, DOI: 10.7554/eLife.32904.

## Polina Anikeeva

2011

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2012

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2013

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- Chen, R., Christiansen, M.G. and Anikeeva, P., Maximizing hysteretic losses in magnetic ferrite nanoparticles via model-driven synthesis and materials optimization. *ACS Nano*, 7:8990-9000, 2013.

2014

- Birmingham, K., Gradinaru, V., Anikeeva, P., Grill, W.M., Pikov, V., McLaughlin, B., Pasricha, P., Weber, D., Ludwig, K., Famm, K., Bioelectronic medicines: a research roadmap. *Nat Rev Drug Discov.*, 13:399-400, 2014.
- Lu, C., Froriep, U. P., Koppes, R. A., Canales, A., Caggiano, V., Selvidge, J., Bizzi, E. and Anikeeva, P., Polymer fiber probes enable optical control of spinal cord and muscle function *in vivo*. *Adv. Funct. Mater.* 24: 6594–6600, 2014.
- Pashaie, R., Anikeeva, P., Lee, J-H., Prakash, R., Yizhar, O., Prigge, M., Chander, D., Richner, T.J. and Williams, J. , Optogenetic brain interfaces. *IEEE Reviews in Biomedical Engineering*, 7:3-30, 2014.

2015

- Canales, A., Jia, A., Froriep, U. P., Koppes, R. A., Tringides, C.M., Selvidge, J., Lu, C., Hou, C., Wei, L., Fink, Y. and Anikeeva, P., Multifunctional fibers for simultaneous optical, electrical and chemical interrogation of neural circuits *in vivo*. *Nature Biotechnology*, 33:277-284, 2015.
- Chen, R., Romero, G., Christiansen, M.G., Mohr, A., and Anikeeva, P., Wireless magnetothermal deep brain stimulation. *Science*, 347:1477-1480, 2015.
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- Anikeeva, P. and Koppes, R.A., Restoring the sense of touch. *Science* 350:274-275, 2015.
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- Anikeeva, P. and Jia, X., Remote-controlled mice. *Cell Systems*, 1:104-105, 2015.

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- 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.
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### Askkan Ashrafi

2013

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2014

- Ashrafi, A., Optimization of the quantized coefficients for DDFS utilizing polynomial interpolation methods. *IEEE Transactions on Circuits and Systems II: Express Briefs*, 1:105-109, 2014.

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#### Scott Bellman

2014

- Bellman, S., Burgstahler, S., and Ladner, R., Work-based learning experiences help students with disabilities transition to careers: A case study of University of Washington projects. *WORK: A Journal of Prevention, Assessment & Rehabilitation*. 48, 399-405, 2014.

#### Bing Brunton

2015

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## Howard Chizeck

2011

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2012

- Nia Kosari, S., Ramadurai, S., Chizeck, H.J. and Hannaford, B., Robotic compression of soft tissue. Proc. 2012 IEEE International Conference on Robotics and Automation, St. Paul-Minneapolis, May 2012.
- Ramadurai, S., Nia Kosari, S., King, H.H., Chizeck, H.J. and Hannaford, B., Application of unscented Kalman filter to a cable driven surgical robot: A simulation study. Proc. 2012 IEEE International Conference on Robotics and Automation, St. Paul-Minneapolis, May 2012.
- Matlack, C., Moritz, C. and Chizeck, H.J., Applying best practices from digital control systems to BMI implementation. 34<sup>th</sup> IEEE Engineering in Medicine and Biology Conference, San Diego, Aug. 2012.
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- Chizeck, H.J., Algorithms for haptic rendering and virtual fixtures for robotic surgery. RSS 2012 Workshop on Algorithmic Frontiers in Medical Robotics: Manipulation in Uncertain, Deformable, Heterogeneous Environments, Sydney, Australia, July 2012.
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### Eric Chudler

2012

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2018

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## Tom Daniel

2012

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#### Felix Darvas

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#### Adrienne Fairhall

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