

Sanjay Narasiwodeyar

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Education: *University of Illinois, Urbana-Champaign, Urbana, IL*, BS in Specialized Physics - 2014
State University of New York at Brockport, Brockport, NY, BS in Psychology - 2016
Florida International University, Miami, FL, PhD in Cognitive Neuroscience - 2021

Research Interests:

My primary interest is in exploring the neuro-computational bases of learning and memory. Currently, I am involved in building a computational theory that attempts to explain the representational role of the hippocampus.

Initially, I received research training in experimental condensed matter physics. As an undergraduate, I was also involved in computational modeling of associative learning. My experiences from multiple fields of science have led me to take an interdisciplinary approach to my current work. I believe that finding basic mechanisms of learning requires a computational framework that can combine results from animal electrophysiology, behavioral neuroscience, and human neuroimaging. Alternatively, my long term research interest is precisely in devising such a computational framework.

Research Experience:

Research Assistant - Neuro-computational modeling of learning circuits (Florida International University, Miami, 2016 – present)

Research Assistant - Computational modeling of temporal dynamics in associative learning (SUNY Brockport, 2015 – 2016)

Research Assistant - Experimental solid state physics; emergent behavior in heavy fermion superconductors (UIUC, Urbana, 2012-2014)

Research Assistant - Experimental Atomic Physics; non-linear optical rotation in Cs and Rb atoms (Indian Institute of Science, Bangalore, 2011)

Publications:

Witnauer, J. E., Rhodes, L., Kysor, S., Narasiwodeyar, S. (submitted). Sometimes competing retrieval predicts the selective role of within-compound associations in retrospective revaluation. *Behavioural Processes*

Narasiwodeyar, S., Dwyer, M., Liu, M., Park, W. K., & Greene, L. H. (2015). Two-step fabrication technique of gold tips for use in point-contact spectroscopy. *Review of Scientific Instruments*, 86(3), 033903.

Park, W. K., Narasiwodeyar, S. M., Bauer, E. D., Tobash, P. H., Baumbach, R. E., Ronning, F., ... & Greene, L. H. (2014). Hidden order and hybridization gap in URu₂Si₂ via quasiparticle scattering spectroscopy. *Philosophical Magazine*, 94(32-33), 3737-3746.

Conference Presentations:

Greene, L. H., Narasiwodeyar, S. M., Dwyer, M., Park, W. K., & Canfield, P. C. (2015, March). Hybridization and coherence in the intermediate valence compound YbAl₃ via quasiparticle scattering spectroscopy (QPS)*. In *APS Meeting Abstracts* (Vol. 1, p. 22013).

Narasiwodeyar, S., Dwyer, M., Greene, L., Park, W. K., Bauer, E., Tobash, P., ...& Canfield, P. (2014, March). Hybridization in Kondo lattice heavy fermions via quasiparticle scattering spectroscopy (QPS). In *APS Meeting Abstracts* (Vol. 1, p. 46009).

Greene, L. H., Narasiwodeyar, S. M., Banerjee, P., Park, W. K., Bauer, E. D., Tobash, P. H., ... & Thompson, J. D. (2013, March). Quasiparticle scattering spectroscopy (QPS) of Kondo lattice heavy fermions. In *APS Meeting Abstracts* (Vol. 1, p. 19008).

Awards:

Robert A Stein Award. Spring 2013. Physics Department, University of Illinois at Urbana-Champaign

Skills: Python, R, MatLab, Mathematica