

Scott R. Cole
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Education

Ph.D. Student in Neurosciences, Computational Neuroscience Specialization 2014 - Present
University of California, San Diego La Jolla, CA
GPA: 3.9/4.0

B.S. in Bioengineering, Electrical Engineering Specialization, Mathematics minor 2010 - 2014
Clemson University Clemson, SC
GPA: 4.0/4.0

Publications

1. Mohammed FS, **Cole SR**, Kitchens CL (2013). Synthesis and Enhanced Colloidal Stability of Cationic Gold Nanoparticles using Polyethyleneimine and Carbon Dioxide. *ACS Sustainable Chem. Eng.*, 1(7), 826-832.

Presentations

1. **Cole SR**, Peterson EJ, de Hemptinne C, Starr P, Voytek B. Deep brain stimulation changes the shape of motor cortical beta oscillations in Parkinson's Disease. *Cognitive Neural Systems (CNS) Seminar Series*, La Jolla, CA, USA. 2015 Sep.
2. **Cole SR**, Peterson EJ, de Hemptinne C, Starr P, Voytek B. Deep brain stimulation changes the shape of motor cortical beta oscillations. *Society for Neuroscience (SfN) Annual meeting*, Chicago, IL, USA. 2015 Oct. Poster.
3. Noto T, **Cole SR**, Gao R, Peterson EJ, Voytek B. Neural network properties can be inferred from electrophysiological power spectral geometry. *Society for Neuroscience (SfN) Annual meeting*, Chicago, IL, USA. 2015 Oct. Poster.
4. Thielk M, **Cole SR**, Sharpee T, Gentner TQ. Neural representation of morphed motifs in European Starling NCM. *MURI Winter School: Dynamics of multifunction brain networks*, San Diego, CA, USA. 2015 Jan. Poster.
5. **Cole SR**, Voytek B. Effect of noise on a pulse-coupled neural network with phase-amplitude coupling. *Center for Science of Information Summer School*, San Diego, CA, USA. 2014 Aug. Poster.
6. **Cole SR**, Mason JI, Lestrangle SJ, Alvarez TL. Effects of stereoscopic vision training on the vergence system of binocularly normal subjects. *Biomedical Engineering Society Annual Meeting*, Seattle, CA, USA. 2013 Sep. Poster.
7. **Cole SR**, Dean D, Kitchens CL. Synthesis and cytotoxicity of one step synthesis cationic gold nanoparticles. *Biomedical Engineering Society Annual Meeting*, Seattle, CA, USA. 2013 Sep. Poster.
8. **Cole SR**, Steele TWJ. Biodegradable elastomers for targeted drug delivery applications. *Society for Biomaterials symposium*, Clemson, SC, USA. 2012 Sep. Podium.
9. **Cole SR**, Mohammed FS, Kitchens CL. Synthesis, characterization, and the effect of carbon dioxide on polytheleneimine-capped gold nanoparticles. *International Conference of Young Researchers on Advanced Materials*, Singapore. 2012 Jul. Poster.
10. **Cole SR**, Mohammed FS, Kitchens CL. Synthesis of gold and silver nanoparticles functionalized with polyethyleneimine. *Society for Biomaterials symposium*, Clemson, SC, USA. 2011 Oct. Poster.

Neuroscience Software

Cole SR & Peterson EJ. (2015). Pacpy: A library for calculating phase-amplitude coupling. v1.0.1. *Python*.

<https://pypi.python.org/pypi/pacpy/>

Cole SR. (2015). Pacmat: A library for calculating phase-amplitude coupling. *MATLAB*.

<https://github.com/voytekresearch/pacmat>

Cole SR. (2015). CleanUtahLFP: Artifact rejection high density multi-electrode local field potential recordings. *MATLAB*. <https://github.com/srcole/CleanUtahLFP>

Scholarships & Grants

Graduate Research Fellowship - National Science Foundation 2014-2017
Barry M. Goldwater Scholarship 2013
Conference Travel Grant - Calhoun Honors College, Clemson University 2012, 2013

Educational Enrichment Travel Grant - Calhoun Honors College, Clemson University 2012

Honors & Awards

Faculty Scholarship Award - Clemson University 2014
Poly-Med Outstanding Senior Award - Clemson University Bioengineering Department 2014
Larry S. Bowman Outstanding Junior Award - Clemson University Bioengineering Department 2013
1st Place Undergraduate Oral Presentation - Society for Biomaterials Symposium, Clemson University 2012
S. W. Shalaby Outstanding Sophomore Award - Clemson University Bioengineering Department 2012
2nd Place, National Accounting competition - Future Business Leaders of America 2009

Academic Activities

Peer review (co-reviewer) - eLife (1 article) 2015-present
Computational neuroscience committee - UCSD Neurosciences Graduate Program 2014-present
Neuroscience education outreach - UCSD Neurosciences Graduate Program 2014-present
Society for Neuroscience (SfN) member 2014-present
Undergraduate Clemson Bioengineering Society - President 2011-2014
Electrical Engineering & Mathematics tutor - Clemson University Academic Success Center 2012-2014

Teaching

UCSD Neurosciences Graduate Program Bootcamp: assistant for MATLAB crash course, neural decoding workshop, & neural oscillations special project Sep 2015

Mentoring

Katie McGreevey - incoming-freshman summer researcher, nanoparticle synthesis Jul-Aug 2011