

Dr. Stephanie Jones, Curriculum Vitae

STEPHANIE R. JONES, PHD

Associate Professor (Research)
Department of Neuroscience, Brown University
<https://www.brown.edu/research/labs/jones/>



EDUCATION

Undergraduate: BA, Mathematics (Computer Science minor), *Magna Cum Laude*
1993 Boston College, Chestnut Hill, MA
Graduate: MA, Mathematics
1995 Boston College, Chestnut Hill, MA
2001 PhD, Mathematics
Disciplines: Dynamical Systems Theory and Computational Neuroscience
Advisor: Nancy Kopell, Boston University, Boston, MA
Research Fellow: Training in Neuroscience & Human Neurophysiology (MEG/EEG)
2001-2005 Athinola A. Martinos Center for Biomedical Imaging
Massachusetts General Hospital / Harvard Medical School, Boston, MA

PROFESSIONAL APPOINTMENTS

2005-2011 Faculty, Harvard Medical School, Boston, MA
2005-2013 Assistant in Neuroscience, Radiology, Martinos Center for Biomedical Imaging
Massachusetts General Hospital (MGH), Boston, MA
2011-2013 Associate Scientist, Newborn Medicine Neuroimaging & Developmental Center
Boston Children’s Hospital (BCH), Boston, MA
2011-2016 Assistant Research Professor, Brown University, Providence, RI
2016-present Computational Neuroscientist, CfNN, Providence Veteran’s Medical Center, RI
2016-present Associate Research Professor, Brown University, Providence, RI

HONORS and AWARDS

1993 Alfred A. Bennet Excellence in Mathematics Teaching Award, Boston College
1993 Phi Beta Kappa, National Honor Society, Boston College
1993-1995 Dean’s Fellowship, Dept. of Mathematics, Boston College
2008 Claflin Distinguished Scholar Award, Harvard Medical School
2010 MGH Merit Award, Massachusetts General Hospital
2011 Scholars in Medicine Dr. Lynne Reid /Shore Fellowship, Harvard Medical School
2012 Harvard Catalyst Advanced Imaging Award, Harvard Translational Science Center
2012 & 2013 New Frontiers Award, Brown Univ. / Norman Prince Neuroscience Institute
2014 Dean’s Emerging Areas of New Science (DEANS) Award, Brown Univ. BioMed
2016 NIH BRAIN Initiative Award

Administrative and Scientific Leadership Positions

2013 Panel Advisor in NIH Workshop for President Obama’s BRAIN Initiative
“Theory, Computation and Big Data”, Boston, MA
2014 Panel Advisor in NFS Workshop for President Obama’s BRAIN Initiative
“Quantitative Theories of Learning, Memory, and Prediction”, Arlington, VA
2015 Speaker at Statistical and Applied Mathematical Sciences Institute Workshop
“Program on Challenges in Computation Neuroscience”, Raleigh, NC
2009-present Executive Committee: “Cognitive Rhythms Collaborative”, cogrhythms.bu.edu
2014-present Associate Editor for MIT Press Journal *Neural Computation*
2016-present Brown Brain Stimulation Facility Scientific Advisory Committee
2016-present Executive Committee: Providence VA Center for Neurorestoration & Neurotech.

Grant Review Panel Membership

2013	American Association for the Advancement of Science
2014	Advisory Board Member and Competition Judge for NIH-Center for Advancing Innovation Brain, The Neuro Start-Up Challenge
2015	NSF-NIH Panel Member: Collaborative Research in Computational Neuroscience
2016	NIH Panel Member: BRAIN Foundations of Non-Invasive Functional Human Brain Imaging and Recording
2016	NIH Panel Member: Clinical Neuroscience and Neurodegeneration Study Section

Conference and Symposium Organization

2013	Conference Co-Organizer “Rhythmic Dynamics and Cognition Conference” NSF Cognitive Rhythms Collaborative (CRC) sponsored, MIT, Cambridge, MA
2014	Symposium Organizer (CRC) “Frontiers in Non-Invasive Brain Stimulation”, Boston University, Boston, MA
2014	Symposium Organizer (BIOMAG) “From Neurons to Behavior: Advances in Computational Neural Modeling to Interpret MEG”, Halifax, Nova Scotia
2016	Symposium Organizer (COSYNE) “Biophysical Principles of Brain Oscillations and Their Meaning for Information Processing”, Salt Lake City, UT
2017	Co-Chair Organizer “Annual NIH/NSF Collaborative Research in Computational Neuroscience (CRCNS) PI Meeting”, Brown University, Providence, RI
Dec. 2017	Co-Chair Organizer NINDS Workshop: “Neurodevelopment Disorders Biomarkers”, Bethesda, MD

RESEARCH

Professional Educational Materials and Chapters in Books (reverse chronological)

1. Vierling-Claassen N and **Jones SR.** (2016) “Neural Rhythms”. Chapter in Computational Neuroscience Textbook: From Neurons to Cognition: Computational Neuroscience MIT Press; Editor: M. Arbib
2. **Jones SR.** (2015) “The Puzzle of Brain Rhythms”, contributed Path of Discovery Box, in Neuroscience: Exploring the Brain, 4th edition; MF. Bear, BW. Connors, & M. Paradiso
3. **Jones SR.** (2015) “Local Field Potential: Relationship to Electroencephalography (EEG) and Magnetoencephalography (MEG)”. Chapter in Encyclopedia of Computation Neuroscience Springer Reference; Editors: D. Jaeger and R. Jung. Springer-Verlag Berlin Heidelberg.
4. **Jones SR.** (2011) “Biophysically principled computational neural modeling of magneto-/electroencephalography measured human brain oscillations”. Chapter in Springer Neuromethods Textbook Series Neuronal Network Analysis; Editors: T. Fellin & M. Hallasa

Journal Articles (reverse chronological)

A full list of my journal publications can be found at

https://scholar.google.com/citations?hl=en&user=H2lcpR0AAAAJ&view_op=list_works&sortby=pubdate

1. Shin H., Law R., Tsutsui S., Moore CI and **Jones SR.** (2017) The rate of transient beta frequency events predicts impaired function across tasks and species. bioRxiv doi: <https://doi.org/10.1101/128769>, in review *eLife*.
2. Lee S, Asaad W, and **Jones SR** (2017) Computational modeling to improve treatments for Essential Tremor. *Drug Discovery Today*. In Press
3. Black CJ, Voights J, Agrawal U, Ladow M, Santoyo J, Moore CI, **Jones SR.** (2017) Open Ephys. Electroencephalography: A modular, low-cost, open-source solution to human neural recordings. *J. Neural Engineering*. 14(3):035002

4. Sherman M, Lee S, Law R, Haegens S, Thorn C, Hamalainen M, Moore CI, **Jones SR**. (2016) Neural mechanisms of transient neocortical beta rhythms: Converging evidence from humans, computational modeling, monkeys, and mice. *Proc. Natl. Acad. Sci.*; 113(33):E4885-94
** Featured Brown University News and Events Press Release*
5. **Jones SR** (2016) When brain rhythms aren't 'rhythmic': implications for their mechanisms and meaning. *Curr. Opin. Neurobiol.*; 40:72-80
6. Law R and **Jones SR**. (2016) Membrane state diagrams make electrophysiological models simple. doi: <https://doi.org/10.1101/051839>
7. Hwang K, Ghuman AS, Dara S, Manoach DS, **Jones SR**, Luna B. (2016) Frontal preparatory neural oscillations associated with cognitive control: A developmental study comparing young adults and adolescents. Adolescent immaturities in frontal preparatory neural oscillations associated with inhibitory control *Neuroimage*; 136:139-48.
8. Sacchet M, LaPlante R, Wan Q, Pritchett D, Lee A K-C, Hamalainen M, Moore CI, Kerr CE and **Jones SR**. (2015) Attention drives synchronization of alpha and beta rhythms between right inferior frontal and primary sensory cortex. *J. Neurosci.*; 35(5):2074-20
9. Ahlfors SP, **Jones SR**, Ahveninen J, Hamalainen MS, Bar M. (2015) Direction of magnetoencephalography sources associated with feedback and feedforward contributions in a visual object recognition task. *Neurosci. Lett.*; 585:149-54.
10. Hwang Kai, Ghuman Avniel S, Manoach Dara S, **Jones SR**, Luna B. (2014) Cortical neurodynamics of inhibitory control. *J. Neurosci.*; 34(29):9551-61.
11. Lee S and **Jones SR**. (2013) Distinguishing mechanisms of gamma frequency oscillations in human current source signals using a computational model of a laminar neocortical network. *Frontiers in Human Neurosci.*; Dec 18; 867:869
12. Kerr CE, Sacchet M, Lazar S, Moore CI, **Jones SR**. (2013) Mindfulness starts with the body: somatosensory attention and top-down modulation of cortical alpha rhythms in mindfulness meditation. *Frontiers in Human Neurosci.*; Feb 13:7-12
** Featured Brown University News and Events Press Release*
13. Carlen M, Konstantinos M, Siegle JH, Cardin JA, Fatai F, Vierling-Claassen D, Ruhlmann C, **Jones SR***, Deissertoth K, Sheng M, Moore CI, Tsai LH. (2012) A critical role for NMDAR parvalbumin interneurons for gamma rhythm induction and cognitive function. *Molecular Psych.*; 17(5):537-48
** Senior author contribution on computational neural modeling component*
14. Wan Q, Kerr CE, Pritchett D, Hamalainen M, Moore CI, **Jones SR**. (2011) Dynamics of dynamics within a single data acquisition session: variation in neocortical alpha oscillations in human MEG. *PLoS ONE.*;6(9):e24941.
15. Kerr CE*, **Jones SR***, Wan Q, Pritchett DL, Wasserman RH, Wexler A, Villanueva JJ, Shaw JR, Kaptchuk TJ, Littenberg R, Hamalainen MS, Moore CI. (2011) Effects of mindfulness meditation training on cortical dynamics: A MEG study of alpha rhythm modulation in SI. *Brain Research Bulletin.* 85(3-4):96-103.
** Joint first author contributions*
16. Vierling-Claassen D, Cardin JA, Moore CI, **Jones SR**. (2010) Computational modeling of neocortical oscillations driven by cell-type selective optogenetic drive: separable resonant circuits controlled by low-threshold spiking and fast-spiking interneurons. *Front. Human Neurosci.* Nov 22, 4:198.
17. **Jones SR**, Kerr CE, Wan Q, Pritchett DL, Hamalainen MS, Moore CI. (2010) Cued spatial attention drives representation-specific modulation of the alpha rhythm in primary somatosensory cortex. *Journal of Neurosci.* ;30(41):13760-5.
18. Ziegler DA, Pritchett DL, Hosseini-V. P, Corkin S, Hamalainen MS, Moore CI, **Jones SR**. (2010) Transformations in oscillatory activity and evoked responses in primary somatosensory cortex in middle age: A combined comput. neur. modeling & MEG study. *Neuroimage*; 52(3):897:912.

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19. **Jones SR**, Pritchett DL, Stufflebeam SM, Sikora M, Hamalainen MS, Moore CI. (2009) Quantitative analysis and biophysically-realistic modeling of the MEG mu rhythm: rhythmogenesis and modulation of sensory evoked responses. *Journal of Neurophysiology*; 102(6):3554-72.
20. Boas DA, **Jones SR**, Devor A, Huppert TJ, Dunn AK, Dale AM. (2008) A vascular anatomical network model of the spatio-temporal response to brain activation. *Neuroimage*; 40(3):1116-29.
21. **Jones SR**, Pritchett DL, Stufflebeam SM, Hamalainen, M, Moore CI. (2007) Neural correlates of tactile detection: A combined MEG and biophysically based computational modeling study. *Journal of Neurosci.*; 27(40):10751-10764.
22. **Jones SR**, Kopell N. (2006) Local network parameters can affect inter-network phase lags in central pattern generators. *Journal of Math Biology*; 52(1):115-40.
23. Devor A, Ulbert I, Dunn AK, Narayanan SN, **Jones SR**, Andermann ML, Boas DA, Dale AM. (2005) Coupling of the cortical hemodynamic response to cortical and thalamic neuronal activity. *Proc. Natl. Acad. Sci.* 2005;102(10):3822-7.
24. Pinto DJ, **Jones SR**, Kaper TJ, Kopell N. (2003) Analysis of state-dependent transitions in frequency and long-distance coordination in a model oscillatory cortical circuit. *Journal of Computational Neurosci.*; 15(2):283-98.
25. Garabedian CE, **Jones SR***, Merzenich MM, Dale A, Moore CI. (2003) Band-pass response properties of rat SI neurons. *Journal of Neurophysiology*; 90(3):1379-91.
**First author contribution on computational neural modeling component*
26. **Jones SR**, Mulloney B, Kaper TJ, Kopell N. (2003) Coordination of cellular pattern-generating circuits that control limb movements: the sources of stable differences in intersegmental phases. *Journal of Neurosci.*; 23(8):3457-68.
27. **Jones SR**, Pinto DJ, Kaper TJ, Kopell N. (2000) Alpha-frequency rhythms desynchronize over long cortical distances: a modeling study. *Journal of Computational Neurosci.*; 9(3):271-91.

Papers in Progress

- Jones SR**. Getting the biophysics right: bridging computation across scales from humans to animals. Invited Article in *Trends In Neuroscience*.
- Law R., Lee S., **Jones SR** Circuit mechanisms underlying the impact of beta oscillations on human sensory perception.
- Lee S, Segar D, **Jones SR**, Asaad W. Motor-related spiking activity in cerebellar thalamus of Essential Tremor patients shows adaptive direction tuning.
- Lee S, Segar D, Asaad W, **Jones SR**. Experimental and modeling study of the mechanisms and modulation of tremor-related cerebellar thalamic LFP oscillations in Essential Tremor.

Technological and Other Scientific Innovations

- 2007, 2009, & 2010 Developed publicly available neural modeling code of generalizable cortical column circuitry to simulate current dipole MEG/EEG signals and local field potential (LFP) recordings in parallel using shareware NEURON. This code is freely available at <http://senselab.med.yale.edu/ModelDB/SearchByAuthor.asp?authorStr=Jones+SR>
We are currently turning this model into a user-friendly, GUI-driven software tool for circuit level hypothesis testing of human MEG/EEG/ECOG signals (RO1 EB022889)

RESEARCH GRANTS

Current Grants as Principle Investigator

- 2016 - 2019 NIBIB RO1 EB022889: BRAIN Initiative Award in Theories, Models and Analysis
Role: Contact PI (Co-PIs M. Hamalainen and M. Hines)
“Human Neocortical Neurosolver”
- 2017-2019 Berkman-Landis Family Fund Gift
Role: PI in stewardship for late Dr. Catherine Kerr
Supporting Research in Patient Healing, Self Efficacy and Vitality
- 2014 - 2019 NIMH RO1 MH106174 Collaborative Research in Computat. Neurosci. (CRCNS)
Role: Contact PI (Co-PIs M. Hamalainen and A. Gramfort)
“US-France Research: Revealing thalamocortical interactions in humans with integrated MEG/EEG, human intracranial recordings and computational neural modeling”
- 2015-2017 Providence VA Center for Excellence in Neurorestoration and Neurorehabilitation
Role: PI (Co-PI Ben Greenberg)
“Non-Invasive Approach to Alleviate Pain: Integrated tACS and Mindfulness Meditation”

Current Grants as Co-Investigator or Trainer

- 2013-present National Institutes of Health T32 Training in Neural Dynamics.
Role: Trainer (PI: Lipscome/Moore)
- 2012-present National Institutes of Health T32 Training in Neuroscience.
Role: Trainer (PI: Lipscome/Sheinberg)

Completed Grants

- 2013-2016 Brown Inst. for Brain Sciences / Norman Prince Neurosci. Inst.: New Frontiers Fund
Role: PI (Co-PI Ben Greenberg),
“Effects of tACS in Tactile Perception and Acute Pain”
- 2016 NIH SBIR: “NMDA Receptor NR2D for the Treatment of IM”
Role: Subcontract PI (PI: Chinglu Pharmaceutical Research, LLC)
- 2014-2015 Brown Univ. BioMed Dean’s Emerging Areas of New Science Award (DEANS)
Role: PI (Co-PI Wael Asaad)
“DBS to Reduce Beta Rhythms in Parkinson’s disease Guided by Neural Modeling”
- 2011-2014 NSF Collaborative Research in Computational Neuroscience (CRCNS)
Role: PI (Co-PI Christopher Moore)
“Contributions of thalamus and basal ganglia to neocortical beta oscillations”
- 2012-2013 Brown Inst. for Brain Sciences / Norman Prince Neuroscience Inst.: New Frontiers Fund
Role: PI (Co-PI Wael Asaad)
“Targeting Deep Brain Stimulation to minimize cortical beta rhythms in PD”
- 2012-2013 Harvard Catalyst Boston Children’s Hospital Pilot Research Grant
Role: PI
“Electrophysiological cortical abnormality in encephalopathy of prematurity”
- 2011-2012 Harvard Med. Sch., Scholars in Medicine Dr. Reid Fellowship
Role: PI
“Making Beta Waves: Integrating Methods to Rescue Parkinsonian Brain Activity”
- 2008-2010 Harvard Medical School, Claflin Distinguished Scholar Award
Role: PI
“Computational Modeling of Hemo-Neural Interactions Relevant to Epilepsy”
- 2005-2010 NIH K25 Mentored Career Award
Role: PI
“Neurodynamics of Attention MEG, EEG and Modeling”

Submitted Grants

- Jan. 2017 NIH COBRE: "Center for Neural Circuits and Disease"
PI Ben Greenberg
Role: PI / Co-Director of "Circuit Therapeutics Core" / Project Mentor
- April 2017 NIH BRAIN Initiative Administrative Supplement: R01:MH11875 "Micro-TMS
Technology for Ultra-Focal Brain Stimulation"
Role: Subcontract PI (PIs Giorgio Bonmassar MGH, Alvaro Pascual-Leone BIDMC)
- June 2017 VHA Research and Development Merit Award
Role: Co-PI (PI Ben Greenberg)
"Mapping Mindfulness: Neural Mechanisms of Mindfulness Treatment in Chronic Pain"
- Pending Submission NIH COBRE: Center for Nervous System Function
PI: Jerome Sanes
Sept. 2017 Role: Project PI "The causal role of cortical beta events in human sensory perception"
- In Revision NIH BRAIN Initiative: Foundations of Non-Invasive Functional Human Brain Imaging
Role: Subcontract PI (PIs Lara Rangel, Todd Coleman, UCSD)
"Investigating the Rhythmic Activity in Cortical Circuits Underlying EEG Generation"
- In Revision NINDS: RO1
Role: Co-PI (PI Wael Asaad)
"Mechanisms of Action Remapping, Tremor, and DBS in the Human VIM Thalamus"

INVITED SEMINARS and SYMPOSIUM SPEAKER (reverse chronological since 2007)

- 2017 *Invited Speaker & Co-Chair:* NINDS Sponsored Workshop: Neurodevelopmental Disorders Biomarkers, Bethesda, MD.
Organizers: M. Sahin, SR Jones, M. Sahin, J. Sweeney (December 2017)
Invited Speaker: Computational Psychiatry: Satellite Meeting Annual SFN Conference, Washington, DC.
Organizers: P. Dayan, X. Gu, R. Montague (November 2017)
Invited Speaker: Cutting EEG Annual Meeting: University of Glasgow, Scotland
Organizer: M. Philiastides
Invited Keynote Speaker: MEG-UK Annual Meeting: Oxford, UK
Organizers: M. Woolrich and K. Nobre
- 2016 *Invited Research Highlight Talk:* BRAIN Investigators Meeting, Bethesda, MD
Organizers: E. Talley and G. Peng
Invited Panel Presentation: Managing and Exploiting Big Data For Neuroscience Discovery
BRAIN Investigators Meeting, Bethesda, MD
Organizers: E. Talley and G. Peng
Invited Seminar: Georgia Tech. Neural Engineering Center: Neuro Sem. Series, Atlanta, GA
Organizers: G. Stanley and C. Rozell
Invited Workshop Speaker: Princeton Oscillations Workshop, Princeton, NJ
Organizers: Kastner, Nobre, Knight, Jensen, Schroeder
Invited Symposium Speaker: Computational and Systems Neuroscience (COSYNE) Meeting
Workshops: Symposium on Biophysical principles of brain oscillations and their meaning for information processing, Salt Lake City, UT
Organizers C. Anastassiou, G. Kreiman, S. Jones

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- 2015 *Invited Symposia Speaker: The Basal Ganglia-Thalamocortical Circuit: Celebrating 40 Years of Dopamine-Related Research at NIH and Beyond.* Bethesda, MD
Organizer: J. Walters
- Invited Symposium Speaker: NIMH-Organized Symposium on Brain Stimulation Based Neural Circuit Modeling* Chicago, IL
Organizer: A. Rossi
- Invited Seminar: Brown Univ. DEANS Award Translational Research Seminar,* Providence RI
Organizer: Dean J. Elias
- Invited Workshop Speaker: SAMSI Program on Challenges in Computational Neuroscience Opening Workshop,* Raleigh, NC
Organizer: C. Curto, R. Kass, H. Chen, H. Zhu
- Invited Workshop Speaker: Computational Neuroscience Meeting Workshops: Symposium on Oscillations,* Prague, CZ
Organizer; H. Rotstein
- 2014 *Invited NSF Panel Presentation: President Obama's Brain Research Through Advancing Innovative Neurotechnology (BRAIN) Initiative Workshop on "Quantitative Theories on Learning, Memory and Prediction",* Arlington, VA
Organizers: B. Bialek, N. Kopell, and D. Bassett
- Invited Seminar: Collaborative Efforts in Computational Neuroscience (CRCNS) Principle Investigator Meeting,* Arizona State University, Tempe, AZ
Organizer: C. Crook
- Invited Seminar: Bench to Bedside Seminar Series, Alpert Medical School Brown University,* Providence, RI
Organizer, J. Robson
- Invited Seminar: Human Brainmap Seminar Series, MGH Martinos Center, Boston, MA*
Organizer: Rosen
- 2013 *Invited NIH Panel Presentation: President Obama's BRAIN Initiative Workshop on "Theory, Computation and Big Data",* Boston, MA
Organizers: W. Newsome and C. Bargmann
- Invited Conference Speaker: Sloan-Swartz Centers for Computational Neuroscience Annual Meeting, Brandeis University, Waltham, MA*
Organizers: E. Marder, D. Katz, P. Miller, van Hooser
- Invited Seminar: Swartz Program in Theoretical Neuroscience*
Yale University, New Haven, CT
Organizer: I. Sachdev
- Invited Seminar: Mathematical Biosciences Institute: Sensory Systems and Coding Workshop*
Ohio State Univ, Columbus, OH
Organizers: B. Doiron, A. Fairhall, D. Kleinfeld, J. Rinzel
- Invited Seminar: City College New York CUNY, New York, NY*
Organizer: T. Ro
- Symposium Presentation: Annual COSYNE meeting, Salt Lake City, UT*
Peer Selected: top 3%
- Invited Seminar: Harvard Catalyst Advanced Imaging Symposium, Harvard University,* Boston, MA
Organizer: Gray

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- 2012 *Invited Seminar:* Division of Applied Mathematics, Lefschetz Center for Dynamical Systems
Brown University, Providence, RI
Organizer: G. Menon
Invited Seminar: Collaborative Efforts in Computational Neuroscience (CRCNS) Principle
Investigator Meeting, Washington University, St. Louis, MO
Organizer: K. Thoroughman
Invited Seminar: Fetal Neonatal Neuroimaging and Developmental Science Center Boston
Children's Hospital, Boston, MA
Organizer: PE Grant
Invited Seminar: Neurology Grant Rounds, Rhode Island Hospital, Providence, RI
Organizer: J. Friedman
Invited Symposium Speaker: Cognitive Rhythms Collaborative: Beta Rhythms Minisymp.
Boston University, Boston, MA
Organizer: N. Kopell
- 2011 *Invited Lecturer:* The Autumn School – The Multimodal Brain, MEG Center, University of
Tuebingen, Tuebingen, Germany
Organizer: H. Preissl
- 2010 *Invited Seminar:* Huck Institute for Neurosciences, Penn State, University Park, PA
Organizer: M. Wenger
Invited Seminar Department of Neuroscience, Wellesley College, Wellesley, MA
Organizer: M. Weiss
Invited Seminar: Martinos Center for Biomedical Imaging, Human Brainmap Seminar,
Massachusetts General Hospital, Charlestown, MA
Organizer: B. Rosen
- 2009 *Invited Seminar:* Center for Brain and Memory, Boston University, Boston, MA
Organizer: Stern
- 2007 *Symposium Presentation:* Annual COSYNE meeting, Salt Lake City, UT
Peer Selected: top 3%
Invited Seminar: Dept. of Math and Statistics, Mount Holyoke, South Hadley, MA
Organizer: Pollatsek

TEACHING

- 2015-2017 New Course: "Neural Dynamics: Theory and Modeling." Graduate Course.
Dept. of Applied Mathematics (APMA 2821V), Brown University, Providence, RI
- 2012-2015 Co-Instructor in "Neural Dynamics". Undergraduate Course (Instructor: Moore)
Dept. of Neuroscience (NEURO 1440) Brown University, Providence, RI
- 2008 Lecturer in Neuroscience Graduate Course (Neural Dynamics)
Brain and Cognitive Science Dept, MIT, Cambridge, MA
- 1998-1999 Part-time Faculty Instructor (Multivariate Calculus)
Dept. of Mathematics, Boston College, Chestnut Hill, MA
- 1995-1997 Summer-Term Faculty Instructor (Algebra, Pre-Calculus, Calculus)
AHANA Student Programs Mathematics, Boston College, Chestnut Hill, MA
- 1996-1998 Teaching Fellow (Differential Equations)
Dept. of Mathematics, Boston University, Boston, MA
- 1993-1995 Teaching Fellow (Calculus, Multivariate Calculus)
Dept. of Mathematics, Boston College, Chestnut Hill, MA

FACULTY MENTORSHIP

Current Students

- Post-doctoral Shane Lee, PhD (Brown Neuroscience)
Robert Law, PhD (Brown Neuroscience)
- Graduate Christopher Black (Brown BME)
Prannath Moolchand (Brown Neuroscience)
Hyeyoung Shin (Brown Neuroscience)
Danielle Sliva (Brown Neuroscience)
- Undergrad. Halle Vernon and Sarah Pugliese (Brown Applied Math. Research Projects)

Past Students (mentorship location – current position)

- Post-doctoral Nathan Vierling-Claassen (MGH/Brown Neuroscience – Industry Data Science)
Paul Bowary (Brown Neuroscience – Neuropsych. Resident, Brown Med. Sch.)
- Co-Mentored Elvira Pirondini (EPFL, Grant Sponsored Visiting Graduate Student)
- Graduate Arthur Sugden (Brown Neuroscience – Postdoc Harvard Med. Sch.)
Dominique Pritchett (MIT Brain and Cog Sci./Brown Neurosci. – Postdoc The Champalimaud Foundation in Portugal)
David Ziegler (MIT Brain and Cog Sci. – Postdoc UCSD)
- Undergrad. Shawn Tsutsui (Brown Applied Math: Honors Thesis Advisor – UVA Med. School)
Carolina Santiago (Brown Neuroscience: Honors Thesis Advisor – Neuroelectrics)
Uday Agrawal (Brown Applied Math: Honors Thesis Advisor – Harvard Med. Sch.)
Maxwell Sherman (Brown Applied Math: Honors Thesis Advisor – Park Lab)
Roan LaPlante (Brown Computer Science – MGH Technician)
Nikolas Baya (Brown Applied Math: Summer UTRA Research – Class of 2018)
- Technicians Qian Wan (MGH/MIT – Graduate Student Harvard)
Matthew Sacchet (MGH/MIT – Graduate Student Stanford)

Graduate Student Advisory Committees

- Alex Whithof (Brown Applied Math, PhD 2014)
Brent Cross (Brown BME, MA 2015)
Radu Darie (Brown BME, PhD expected 2018)
Heysol Bermudez Cabrera (Brown Neuroscience NIH-GPP, PhD expected 2018)
Adewole Oyalowo (Brown Neuroscience, PhD expected 2020)

Other Mentorship

- Brown UTRA Advisor (Summers 2013-2016)
Society for Neuroscience, Committee on Women in Neuroscience, Mentor (2006-2007)
Association for Women in Mathematics Mentor Network (2001-present)

PROFESSIONAL SOCIETIES

- 1995-2001 American Mathematical Society, Member
1995-2002 Society for Industrial and Applied Mathematics, Member
1997-present Society of Neuroscience, Member
2014-present Organization of Computational Neuroscience

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