

CURRICULUM VITAE

Sepideh Sadaghiani, Ph.D. Beckman Institute for Advanced Science & Technology
sepideh@illinois.edu University of Illinois, Urbana-Champaign
405 North Mathew Ave
https://connectlab.beckman.illinois.edu Urbana, IL-61801

POSITIONS

Assistant Professor **University of Illinois, Urbana-Champaign** Jan. 2016 - present
Psychology, Cognitive Neuroscience Division

Postdoc **Stanford University** 2015

Genetic polymorphisms influencing large-scale brain network dynamics

Postdoc **University of California, Berkeley** 2010 – 2014

Network dynamics and neurophysiological mechanisms of cognitive control

EDUCATION

Ph.D. **Max-Planck International Research School, Germany & NeuroSpin, France**

Neural and Behavioral Sciences, 2007 – 2010

Dr. Andreas Kleinschmidt

The impact of ongoing brain activity on the variability of human brain function and behavior

M.Sc. **Max-Planck International Research School, Tübingen, Germany**

Neural and Behavioral Sciences, 2004 – 2006

Dr. Uta Noppeney

Naturalistic, metaphoric and linguistic audiovisual interactions in motion discrimination

B.Sc. **Univ. of Osnabrück, Germany & Univ. of California San Diego**

Cognitive Science, 2001 – 2004

Dr. Martin Sereno

Spatiotemporal pattern of brain activation during visually-guided reaching using cortical-surface-based methods

GRANTS AND PRIZES

2016 Carle Illinois Seed Grant, Co-Principal Investigator, \$50k
“Understanding cognitive outcomes of strokes using rhythms of the brain”

2016 Faculty Research Travel Grant, Center for Latin American and Caribbean Studies, \$2k

2011 – 2013 German Research Foundation (DFG) postdoctoral research fellowship

2011 German Academic Exchange Service postdoctoral fellowship (fellowship declined)

2007 – 2010 Doctorate fellowship of Friedrich-Ebert Foundation, Germany

2003 – 2006 Undergraduate and Master studies fellowship of Friedrich-Ebert Foundation, Germany

AWARDS AND HONORS

2016 Excellence in Teaching, University of Illinois Urbana-Champaign, Champaign, IL

2010 *Summa cum laude* for Ph.D.

2004 Highest honors for B.Sc.

PUBLICATIONS

Sadaghiani S, and Kleinschmidt A. "Brain Networks and α -Oscillations: Structural and Functional Foundations of Cognitive Control." *Trends in Cognitive Sciences*, in press.

doi:10.1016/j.tics.2016.09.004.

Sadaghiani S, Poline JB, Kleinschmidt A, D'Esposito M (2015). Ongoing dynamics in large-scale functional connectivity predict perception. *Proceedings of the National Academy of Sciences*, 112 (27), 8463-8468.

Sadaghiani S, D'Esposito M (2014). Functional characterization of the cingulo-opercular network in the maintenance of intrinsic alertness. *Cerebral Cortex*, In press. doi: 10.1093/cercor/bhu072.

Sadaghiani S, Kleinschmidt A (2013). Functional interactions between intrinsic brain activity and behavior. *NeuroImage*, 80:379-86.

Fabienne P, **Sadaghiani S**, Leroy C, Courvoisier DS, Maroy R, Bottlaender M (2013). High density of nicotinic receptors in the cingulo-insular network. *NeuroImage*, 79:42-51.

Sadaghiani S, Scheeringa R, Lehongre K, Morillon B, Giraud AL, D'Esposito M, Kleinschmidt A (2012). Alpha-band phase synchrony is related to activity in the fronto-parietal adaptive control network. *Journal of Neuroscience*, 32(41): 14305-14310.

Ciuciu P, Varoquaux G, Abry P, **Sadaghiani S**, Kleinschmidt A (2012). Scale-Free and Multifractal Time Dynamics of fMRI Signals during Rest and Task. *Frontiers in Physiology* 3:186.
doi:10.3389/fphys.2012.00186.

Coste C, **Sadaghiani S**, Friston K, Kleinschmidt A (2011). Ongoing Brain Activity Fluctuations Directly Account for Inter-Trial and Indirectly for Inter-Subject Variability in Stroop Task Performance. *Cerebral Cortex*, 21(11): 2612-9.

Sadaghiani S, Scheeringa R, Lehongre K, Morillon B, Giraud AL, Kleinschmidt A (2010). Intrinsic Connectivity Networks, Alpha Oscillations and Tonic Alertness: A simultaneous EEG/fMRI Study. *Journal of Neuroscience*, 30(30): 10243-50.

Sadaghiani S, Hesselmann G, Friston KJ, Kleinschmidt A (2010). The relation of ongoing brain activity, evoked neural responses, and cognition. *Frontiers in Systems Neuroscience*, 4(20).
doi:10.3389/fnsys.2010.00020.

Sadaghiani S*, Hesselmann G*, Friston KJ, Kleinschmidt A (2010). Predictive coding or evidence accumulation? False inference and neuronal fluctuations. *PLoS One* 5(3):e9926.
doi:10.1371/journal.pone.0009926 *The first two authors contributed equally.

Varoquaux G, **Sadaghiani S**, Pinel P, Kleinschmidt A, Poline JB, Thirion B (2010). A group model for stable multi-subject ICA on fMRI datasets. *NeuroImage*, 51(1): 288-99.

Sadaghiani S, Hesselmann G, Kleinschmidt A (2009). Distributed and antagonistic contributions of ongoing activity fluctuations to auditory stimulus detection. *Journal of Neuroscience*, 29(42): 13410-7.

Sadaghiani S, Maier JX, Noppeney U (2009). Natural, metaphoric and linguistic auditory direction signals have distinct influences on visual motion processing. *Journal of Neuroscience* 29(20): 6490-9.

Sadaghiani S, Ugurbil K, Uludag K (2009). Neural activity-induced modulation of BOLD post-stimulus undershoot independent of the positive response. *Magnetic Resonance Imaging*, 27(8): 1030-8.

IN PREPARATION:

Sadaghiani S, Ng B, Altmann A, Poline J-B, Banaschewski T, Barker G, Bokde A, Bromberg U, Büchel C, Burke Quinlan E, Conrod P, Desrivieres S, Flor H, Frouin V, Gallinat J, Garavan H, Gowland P, Heinz A, Ittermann B, Lemaitre H, Martinot M-L, Nees F, Papadopoulos-Orfanos D, Paus T, Poustka L, Smolka M, Walter H, Whelan R, Schumann G, Napolioni V, Greicius M, and the IMAGEN Consortium.
A common nicotinic receptor polymorphism promotes individual differences in tonic alertness and cingulo-opercular network activity.

Sadaghiani S, Dombert PL, Lovstad M, Funderud I, Melig T, Endestad T, Knight RT, Solbakk A-K, D'Esposito M.
Lesion to the Fronto-Parietal Adaptive Control Network Impacts Alpha-Band Phase Synchrony.

SCIENCE COMMUNICATION:

Sadaghiani S (2014). The brain never stops. *Front. Young Minds*, 2:6. doi:10.3389/frym.2014.00006

INVITED PRESENTATIONS

-
- Symposium** International Congress of Neurology and Neurosurgery, 2016, Dominican Republic
“Advances in Functional Neuroimaging: Cognitive Relevance of Intrinsic Brain Activity and Connectivity”
“Nicotinic Receptor Polymorphism Linked to Alertness And Cingulo-Opercular Network Activity”
- Symposium** SYNAPSE Carle Neuroscience Conference, 2016, Urbana, IL
“Cognitive Relevance of Intrinsic Brain Activity and Connectivity”
- Symposium** Organization for Human Brain Mapping 2016
“The role of intrinsic functional connectivity in perception”
- Symposium** Cognitive Neuroscience Society 2016, New York City
“Dynamic functional connectivity and behavioral variability.”
- Lecture** UCLA Advanced Neuroimaging Summer Program 2015
“Graph Analysis in fMRI”
“Network Analysis”
- Lecture** International educational workshop series on Resting State fMRI – concepts, methods & applications, ESMRMB, Germany and Austria, 2012, 2013, 2015
“Interactions between ongoing and evoked activity”
“Combining EEG/fMRI of ongoing activity”
- Lecture** Neuroengineering IGERT symposium 2015
“Electrophysiological Signatures of Large-Scale Functional Connectivity Networks”
- Symposium** International Conference on Cognitive Neuroscience 2011, Mallorca, Spain
“Does alpha synchronization index that cyclic inhibition maintains alertness?”
- Symposium** EEG-fMRI: from trial to trial. 2012, Delmenhorst, Germany
“Large-scale phase synchrony and intrinsic connectivity networks for top-down control.”

PROFESSIONAL ACTIVITIES

Journal Reviewer

Nature Neuroscience	Brain Connectivity	Human Brain Mapping
NeuroImage	Cerebral Cortex	PLoS One
Neuropsychologia	Cortex	Progress Neuro-
Journal of Neuroscience	Experimental Brain Research	Psychopharmacol Biol Psychiatry
Journal of Cognitive Neuroscience	Front Systems Neuroscience	Social Cogn & Affective Neurosci
		Schizophrenia Bulletin

Session Chair

Organization for Human Brain Mapping Meeting, Seattle, 2013
“Multi-Modal Modeling and Analysis Methods”

Professional Societies

Organization for Human Brain Mapping
Society for Neuroscience
Cognitive Neuroscience Society

TEACHING AND MENTORING

University of Illinois, Urbana-Champaign

2016-present	Course Instructor , PSYCH-445 Cognitive Neuroscience Laboratory (focus on Functional Neuroimaging)
2016-present	Course Instructor , PSYCH-598 Brain & Cognition Proseminar
2016-present	Postdoctoral Supervisor , Jonathan Wirsich, Beckman Institute
2016-present	PhD Mentor , Maximillian Egan, PhD student, Department of Psychology
2016-present	PhD Mentor , Richard Bido-Medina, PhD student, Neuroscience Program
2016-present	Bachelor Thesis Supervisor , Paul McGrath, visiting international student from University of Osnabrück, Germany
2016	Dissertation Committee Member , Giang-Chau Ngo, Department of Bioengineering
2016	Qualifying Exam Committee Member , Tania SL Kong, Department of Psychology

University of California at Berkeley

2012/11-2013/7	Master Thesis Supervisor , Pascasie Leonie Dombert, visiting international student from University of Maastricht, The Netherlands
2011/8-2012/5	Rotation Supervisor , Cyril Costines, visiting international student from University of Greifswald, Germany

University of Osnabrück, Germany

2003 (spring)	Teaching Assistant , Object-oriented programming with Java
2003 (spring)	Teaching Assistant , Modal logic
2002 (fall)	Teaching Assistant , Introduction to propositional logic