

Steve Wohn Chul Chang

Center for Cognitive Neuroscience
Duke Institute for Brain Sciences
Department of Neurobiology
Duke University

steve dot chang at duke.edu

Positions

Post-Doctoral Research Associate Duke University Advisor: Dr. Michael L. Platt	9/2009 - present
Post-Doctoral Research Associate Washington University in St. Louis Advisor: Dr. Lawrence H. Snyder	5/2009 - 7/2009

Education

Ph.D., Neurosciences Washington University in Saint Louis Thesis Advisor: Dr. Lawrence H. Snyder. Thesis: Sensorimotor Transformation in the Macaque Parietal Reach Region (Defenses: March 20, 2009)	8/2003 - 5/2009
A.B., Psychology, Magna Cum Laude Washington University	8/1999 - 5/2003
Pomfret School, Pomfret, CT	1996-1999

Awards & Honors

Postdoctoral Training Program in Fundamental & Translational Neuroscience (NIH)	2011-2012
Ruth K. Broad Biomedical Research Foundation, Inc. Postdoctoral Fellowship	2010-2011
Advances in Computational Motor Control Travel Award (Society for Neuroscience)	2008
Gordon Research Conference Travel Award	2007
Kauffman Life Science Entrepreneur Fellowship	2006
Lucille P. Markey Pathway Fellowship in Human Pathobiology	2004-2006

John A. Stern Undergraduate Research Award to a Graduating Psychology Major	2003
HHMI Undergraduate Research Fellowship Howard Hughes Medical Institute & Washington University	2002
Undergraduate Teaching Assistantship Sensation & Perception	2001

Publications

Chang SW and Snyder LH.
Idiosyncratic and systematic aspects of spatial representations in the macaque parietal cortex
Proc Natl Acad Sci, 107, 7951–7956 (2010).

Churchland MM, Yu BM, Cunningham JP, Sugrue LP, Cohen MR, Corrado GS, Newsome WT, Clark AM, Hosseini P, Scott BB, Bradley DC, Smith MA, Kohn A, Movshon JA, Armstrong KM, Moore T, **Chang SW**, Snyder LH, Lisberger SG, Priebe NJ, Finn IM, Ferster D, Ryu, SI, Santhanam G, Sahani M, and Shenoy KV.
Stimulus onset quenches neural variability: a widespread cortical phenomenon
Nature Neuroscience, 13, 369-378 (2010).

Chang SW, Papadimitriou C, and Snyder LH.
Using a compound gain field to compute a reach plan
Neuron, 64, 744-755 (2009).

Chang SW, Dickinson AR and Snyder LH.
Limb-specific representations of reaching in the posterior parietal cortex
Journal of Neuroscience, 28, 6128-6140 (2008).

Chang SW and Abrams RA.
Hand movements deviate toward distracters in the absence of response competition
The Journal of General Psychology: Special Issue on Movement, Attention, and Perception, 131(4), 328-344 (2004).

Meeting Abstracts

Chang SW, and Platt ML.
Social Context Gates Other-Regarding Preferences in Rhesus Macaques (*Macaca mulatta*)
Society for Neuroscience (San Diego, CA), 2010 (Poster)

Chang SW, and Snyder LH.
Spatial reference frame and limb specificity in macaque posterior parietal cortex
Society for Neuroscience (San Diego, CA), 2010 (Poster)

Chang SW, and Platt ML.
Social Context Gates Other-Regarding Preferences in Rhesus Macaques (*Macaca mulatta*)
A Brain Research meeting: The *Emerging Neuroscience of Autism Spectrum Disorders*
(San Diego, CA), 2010 (Poster)

Chang SW, and Snyder LH.
Idiosyncratic and systematic features of spatial representations in the macaque PRR
PRR
COSYNE (Salt Lake City, Utah), 2010 (Poster)

Chang SW, Papadimitriou C, and Snyder LH.
Equal and opposite eye and hand gain fields for reaching in PRR
Society for Neuroscience (Chicago, IL), 2009 (Poster)

Churchland MM, Yu BM, Cunningham JP, Sugrue LP, Cohen MR, Corrado GS, Newsome WT, Clark AM, Hosseini P, Scott BB, Bradley DC, Smith MA, Kohn A, Movshon JA, Armstrong KM, Moore T, Chang SW, Snyder LH, Ryu, SI, Santhanam G, Sahani M, and Shenoy KV.
Stimulus onset quenches neural variability: a widespread cortical phenomenon
Computational and Systems Neuroscience (COSYNE), 2008 (Poster)

Chang SW and Snyder LH.
Gain fields for the distance between the ocular fixation point and the arm
Advances in Computational Motor Control VII
Proceedings of the Annual Symposium
Society for Neuroscience (Washington, DC), 2008 (Talk)

Churchland MM, Yu BM, Cunningham JP, Sugrue LP, Cohen MR, Corrado GS, Newsome WT, Clark AM, Hosseini P, Scott BB, Bradley DC, Smith MA, Kohn A, Movshon JA, Armstrong KM, Moore T, Chang SW, Snyder LH, Ryu, SI, Santhanam G, Sahani M, and Shenoy KV.
A widespread stimulus-driven reduction in cortical variability
Dynamical Neuroscience XVI: Neuronal Variability and Its Functional Significance at the Society for Neuroscience (Washington, DC), 2008

Chang SW and Snyder LH.
The distance between the (initial) eye and arm position is coded in PPC using a gain field
The 4th International Statistical Analysis of Neuronal Data (SAND) meeting, University of Pittsburgh (Dept. of Statistics), 2008 (Talk)

Chang SW and Snyder LH.
Diverse frames of reference in the parietal reach region (PRR)
Society for Neuroscience (San Diego, CA), 2007 (Poster)

Chang SW and Snyder LH.
Neurons in the Parietal Reach Region of monkeys plan contralateral but not ipsilateral

arm movements

The Gordon Research Conferences, Oculomotor System Biology (Lewiston, ME), 2007 (Poster)

Chang SW.

How does the brain know where to reach and which arm to use

The Markey Pathway retreat (2006, St. Louis, MO) (Talk)

Chang SW, Dickinson AR and Snyder LH.

Arm selectivity during reach planning in macaque posterior parietal cortex

Society for Neuroscience (Washington, DC), 2005 (Talk)

Chang SW.

Reach Planning: Making a reaching movement is not so simple

The Annual Neurosciences Retreat, Washington University (2005, Lake of the Ozarks, MO) (Talk)

Chang SW, Dickinson AR and Snyder LH.

Reaching with the right or the left arm: Neuronal activity in parietal reach region of monkey posterior parietal cortex -How specific are neurons in posterior parietal cortex in sensorimotor transformation?

The 2002 HHMI / Washington University Fellow Symposium (2002, Saint Louis, MO) (Talk)

Chang SW.

Detecting a target versus reaching out to it: The influence of visual detection on reaching

The Annual Undergraduate-"Psymposium" in Washington University Department of Psychology (2002, Saint Louis, MO) (Talk)

Organizer

Center for neuroeconomics retreat committee	2010
Social Reward Research Group Meeting Duke University	2009-present
Visuomotor Journal Club Washington University	2006-2008

Groups

Society for Neuroscience member	2003-present
Weimaraner rescue volunteer (Wonderweims Resuce)	2007-present