

Javier Omar Garcia

P: (949) 981 7697

E: javier.garcia@uci.edu

1751 University Ave, Apt 205

San Diego, CA 92103

Positions

UNIVERSITY OF CALIFORNIA, San Diego, California.
Associate Specialist (2011-present)
Perception and Cognition Laboratory (PI: Serences)
Department of Psychology

UNIVERSITY OF CALIFORNIA, Irvine, California.
Associate Specialist (2009-2011, 2011-present (WOS))
Human Neuroscience Laboratory (PI: Srinivasan)
Department of Cognitive Sciences

Education

UNIVERSITY OF CALIFORNIA, Irvine, California.
Ph. D. in Cognitive Sciences/Cognitive Neuroscience, 2009
Investigation of neural computation and circuitry of human visual motion perception.

UNIVERSITY OF CALIFORNIA, Irvine, California.
M. A. in Psychology, 2007.

RICE UNIVERSITY, Houston, Texas.
B. A. in Cognitive Sciences and Psychology, 2004

Publications

Garcia, J. & Srinivasan, R. (in preparation). *Dynamic functional networks defined by periodic input with fMRI-EEG.*

Garcia, J. & Grossman, E. (in preparation). *Investigation of motion opponency with Transcranial Magnetic Stimulation.*

Garcia, J. & Srinivasan, R. (in preparation). *Exploring brain states with TMS: networks enhanced and suppressed by occipital and parietal input.*

Garcia, J., Srinivasan, R., & Serences, J. (in preparation). *Dynamic orientation tuning functions: a forward encoding model of EEG.*

Ithipuripat, S., Garcia, J. & Serences, J. (in preparation). *Temporal Dynamics of Steady-state Visual Response Modulation underlying Transient Division of Multifocal Spatial Attention.*

Garcia, J., Pyles, J., & Grossman, E. (in press). Stimulus complexity modulates contrast response functions in the human middle temporal area (hMT+), *Brain Research*.

Thorpe, S., Deng, S., Garcia, J., Lee, R., Wang, M., and Srinivasan, R. (2011). Spatial attention enhances steady-state visual evoked responses in the gamma band. *International Journal of Bioelectromagnetism*, 13(4):233-238.

Garcia, J., Grossman, E., & Srinivasan, R. (2011). Evoked potentials in large-scale cortical networks elicited by TMS of the visual cortex, *Journal of Neurophysiology*, 16(4), 1734-1746.

Garcia, J. & Grossman, E. (2009). Mutual inhibition in human middle temporal area (hMT+) during motion transparency, *European Journal of Neuroscience*, 30, 1172-1182.

Ro., T., Singhal, N., Breitmeyer, B., & Garcia, J. (2009). Unconscious processing of color and form in metacontrast masking, *Attention, Perception, and Psychophysics*, 71, 95-103.

Garcia, J., & Grossman, E. (2008). Necessary but not sufficient: motion perception is required for biological motion, *Vision Research*, 48(9), 1144-1149.

Pyles, J., Garcia, J., Hoffman, D., & Grossman, E. (2007). Visual perception and neural correlates of novel 'biological motion', *Vision Research*, 47(21), 2786-2797.

Awards / Prizes

Graduate

NIH Predoctoral National Research Service Award (*Investigating visual circuitry with simultaneous TMS/EEG*, 2008-2009)

Travel Fellowship, Center for Vision Science, University of Rochester (2008)

Faculty Mentor Program Fellowship (2006-2007)

Social Sciences Summer Fellowship (2005-2007)

Ford Foundation Predoctoral Diversity Fellowship Honorable Mention (2005)

Graduate Opportunity Fellowship (2004-2005)

Undergraduate

FASEB Summer Undergraduate Research Program (2003)

Tsanoff Junior Prize (2003)

Leadership Rice Fellowship (2002)

W. Kyle Morrow Scholarship (2002)

Helen and Herbert Allen Scholarship (2000)

Scientific Abstracts

Garcia, J., Hecker, E., & Srinivasan, R. (November 2011) *Mapping the temporal frequency dependence of functional networks using frequency-tagging with fMRI-EEG*. Society for Neuroscience Annual Meeting, Washington, DC.

Bridwell, D. Garcia, J., Hecker, E., Serences, J., & Srinivasan, R. (November 2011). *Attention shapes large-scale cortical networks in a frequency specific manner*. Society for Neuroscience Annual Meeting, Washington, DC.

Thurman, S., Garcia, J., & Grossman, E. (May 2011). *Determining the feature sensitivity of visual areas to biological motion using brain-based reverse correlation.*, Vision Sciences Society Annual Meeting, Naples, Florida.

Garcia, J., Hecker, E., Bridwell, D. & Srinivasan, R. (November 2010). *Temporal frequency tuning in non-retinotopic cortex*, Society for Neuroscience Annual Meeting, San Diego, California.

Garcia, J., Grossman, E., & Srinivasan, R. (July 2010). *Widespread oscillations induced by TMS reflect the functional connectivity of the human brain*, Federation of European Neuroscientists Forum, Amsterdam, The Netherlands.

Garcia, J., Grossman, E., & Srinivasan, R. (June 2010). *TMS-induced oscillations of the human brain depend on the functional connectivity of the stimulation site*, Human Brain Mapping Annual Meeting, Barcelona, Spain.

Tyler, S., Garcia, J. & Grossman, E. (May 2010). *Attention-based motion analysis of biological motion perception*, Vision Sciences Society Annual Meeting, Naples, FL, USA.

Garcia, J., Srinivasan, R., & Grossman, E. (Nov 2008). *Oscillatory activity induced by single-pulse TMS to visual cortex as measured with simultaneous EEG*, Society for Neuroscience Annual Meeting, Chicago, IL, USA.

Garcia, J., Srinivasan, R., & Grossman, E. (May 2008). *TMS-induced oscillations in orientation discriminations*, Vision Sciences Society Annual Meeting, Naples, FL, USA.

Garcia, J., Pouya, A., & Grossman, E. (August 2007). *Investigation of local motion antagonism with transcranial magnetic stimulation*, European Conference of Visual Perception Annual Meeting, Arezzo, Italy.

Garcia, J., Pyles, J., & Grossman, E. (May 2007). *Neural mechanisms underlying motion opponency in hMT+*, Vision Sciences Society Annual Meeting, Sarasota, FL, USA.

Pyles, J., Garcia, J., & Grossman, E. (May 2007). *fMRI-adaptation for articulated moving objects in ventral temporal brain areas*, Vision Sciences Society Annual Meeting, Sarasota, FL, USA.

Garcia, J., Pyles, J., & Grossman, E. (May 2006). *Neural correlates of degraded complex motion perception*, Vision Sciences Society Annual Meeting, Sarasota, FL, USA.

Pyles, J., Garcia, J., Hoffman, D., & Grossman, E. (May 2006). *Brain activity evoked by the perception of novel biological motion*, Vision Sciences Society Annual Meeting, Sarasota, FL, USA.

Garcia, J., & Grossman, E. (May 2005). *Perception of biological motion at isoluminance*. Vision Sciences Society Annual Meeting, Sarasota, FL, USA.

Burton, P., Garcia, J., & Ro, T. (April 2005). *Spatiotopy in the human frontal eye fields*. Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA, USA.

Other Presentations

Defining dynamic functional network with and without visual input, University of California, San Diego, Cognitive Neural Systems Symposium Series (November 1, 2011).

Linking visual psychophysics with simultaneous TMS-EEG, Beaune, France, Advanced Neurotechnology NeuroMeeting (January 28, 2009).

Neural correlates of degraded complex motion perception, University of California, Irvine, Department of Cognitive Sciences Colloquium Series (May 22, 2006).

Neural mechanisms of complex motion perception, University of California, Irvine, Center for Cognitive Neuroscience Quarterly Meeting (November 3, 2006).

Ad-hoc Reviewer

Cognitive Neuroscience
NSF Grant Agency
French National Research Agency (ANR) "SAMENTA 2011"

Research Skills Techniques used: psychophysics, fMRI, TMS, fMRI/EEG, MEG/EEG, TMS/EEG. Analyses for these techniques has been primarily conducted in Matlab (Mathworks) with in-house routines with some resources including BrainVoyager (Brain Innovations), Advanced Statistical Analysis (Advanced Neurotechnology), and other free and proprietary software.

Affiliations American Physiological Association (2011-present)
Society for Neuroscience (2007-present)
Organization for Human Brain Mapping (2010)
Federation of European Neurosciences Societies (2010)
Vision Sciences Society (2004-2009, 2012)

Teaching Experience TEACHING ASSISTANT, UNIVERSITY OF CALIFORNIA IRVINE
Teaching assistant for introductory classes in the cognitive sciences (2004-2009). Responsibilities include leading discussions, preparing exams, and answering student's questions, a liaison between the students and professor (reviews available).
PSYCH 111B, Research Methods
PSYCH 111C, Research Methods
PSYCH 10C, Probability and Statistics.
PSYCH 160A, Introduction to Cognitive Neuroscience.
PSYCH 9C, Introduction to Psychology.

Other Employment OLFACTION LABORATORY, RICE UNIVERSITY
Research assistant to Denise Chen, October 2003 – July 2004
Assist Dr. Chen in her research, involving olfactory perception. Responsibilities include running experiments and various other lab activities.

JESSE H. JONES GRADUATE SCHOOL OF MANAGEMENT
Research assistant to Jennifer George, August 2002 – May 2003
Assisted Dr. George in her research (industrial/organizational psychology), regarding creativity in the field of nursing and updating the third edition of *Organizational Behavior*.

Miscellaneous Center for Cognitive Neuroscience Graduate Student Representative (2007-2009)
Student Representative for UCI's Center for Cognitive Neuroscience

Ask a Scientist (2006, 2007)
Presented research and other psychological phenomena to Hillview Middle School in Whittier, CA.

References Emily D. Grossman (PhD Advisor)
Associate Professor
Department of Cognitive Sciences
University of California, Irvine
2201 Social & Behavioral Sciences Gateway Building (SBS)
Irvine, CA 92697-5100
P: (949) 824 1530
E: grossman@uci.edu

Ramesh Srinivasan (Postdoctoral Advisor)
Associate Professor
Department of Cognitive Sciences
University of California, Irvine
2201 Social & Behavioral Sciences Gateway Building (SBS)
Irvine, CA 92697-5100

P: (949) 824 8659
E: srinivar@uci.edu

John T. Serences (Postdoctoral Advisor)
Assistant Professor
Department of Psychology
University of California, San Diego
9500 Gilman Drive #0109
La Jolla, CA 92093-0109
P: (858) 534-3686
E: jserences@ucsd.edu

Mike D'Zmura
Professor
Department of Cognitive Sciences
University of California, Irvine
2332 Social & Behavioral Sciences Gateway Building (SBS)
Irvine, CA 92697-5100
P: (949) 824 1501
E: mdzmura@uci.edu