

Marius Cătălin Iordan

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ACADEMIC APPOINTMENTS

Postdoctoral Research Associate 2016 - present

Princeton Neuroscience Institute, Princeton University

Advisors: Jonathan D. Cohen and Dan Osherson

EDUCATION

Ph.D., M.S., Computer Science 2009 - 2016

Stanford University

Advisors: Fei-Fei Li and Diane M. Beck (University of Illinois)

Degree Focus: Cognitive and Computational Neuroscience, Machine Learning

B.A., Computer Science, Mathematics, Cognitive Science 2005 - 2009

Williams College

Magna cum laude, Highest Honors in Computer Science

FELLOWSHIPS, HONORS, AND AWARDS

Society for Neuroscience (SfN) Trainee Professional Development Award 2015

Phi Beta Kappa William and Adeline Hendess Graduate Fellowship 2015

Stanford University Bio-X Vision Sciences Society (VSS) Travel Award 2015

Cognitive Neuroscience Society (CNS) Travel Award 2015

Stanford University Bio-X Society for Neuroscience (SfN) Travel Award 2014

Stanford University SPICE Community Enhancement Grant 2014

Stanford University VPGE Community Engagement Grant 2014

William R. Hewlett Graduate Fellowship (SGF) 2009 - 2014

Science Teaching Through Art (STAR), *Best Poster & Best Presenter Awards* 2013

Sigma Xi Scientific Society, *elected* 2009

Williams College Horace F. Clark Fellowship Prize 2009

Computing Research Association (CRA) Undergraduate Awards, *Honorable Mention* 2009

Phi Beta Kappa Academic Honor Society, *elected* 2008

Williams College Edgar M. Bronfman Class of 1960 Fellowship 2006 - 2007

PUBLICATIONS

Iordan MC (2016). Uncovering the Neural Representation of Multiple Dimensions of Object Categorization in Human Visual Cortex. *Ph.D. Thesis in Computer Science, Stanford University.*

Jordan MC, Greene MR, Beck DM, Fei-Fei L. (2016). Typicality Sharpens Neural Representations in Object-Selective Cortex. *Neuroimage*.

Jordan MC, Joulin A, Beck DM, Fei-Fei L. (2015). Locally-Optimized Inter-Subject Alignment of Functional Cortical Regions. *Machine Learning and Interpretation in Neuroimaging (MLINI) Workshop, NIPS*.

Jordan MC, Greene MR, Beck DM, Fei-Fei L. (2015). Basic Level Category Structure Emerges Gradually Across Human Ventral Visual Cortex. *Journal of Cognitive Neuroscience (JOCN)*.

Baldassano C, **Jordan MC**, Beck DM, Fei-Fei L. (2012). Discovering Voxel-Level Functional Connectivity Between Cortical Regions. *Machine Learning and Interpretation in Neuroimaging (MLINI) Workshop, NIPS*.

Baldassano C, **Jordan MC**, Beck DM, Fei-Fei L. (2012). Voxel-Level Functional Connectivity Using Spatial Regularization. *NeuroImage*.

Grigoriev I, **Jordan MC**, Lubin A, Ince N, Silva CE. (2012). On μ -compatible Metrics and Measurable Sensitivity. *Colloquium Mathematicum*.

Heeringa B, **Jordan MC**, Theran L. (2011). Searching in Dynamic Partial Orders. *Algorithms and Data Structures Symposium (WADS)*.

Jordan MC. (2009). Leaf-Line Tree: A Data Structure for Searching in Dynamic Tree-Like Partial Orders. *Honors Thesis in Computer Science, Williams College*.

Barker S, **Jordan MC**, Albrecht J, Raghavan B. (2008). Kudzu: A Self-Balancing P2P File Transfer System. *Workshop on Tackling Computer Systems Problems with Machine Learning (SysML)*.

MANUSCRIPTS UNDER REVIEW OR IN PREPARATION

Jordan MC, Greene MR, Fei-Fei L, Beck DM. (in preparation). Sequential Warping of Neural Representations According to Cognitive Principles Across the Ventral Stream.

Jordan MC, Fannjiang C, Fei-Fei L, Beck DM. (in preparation). Pushing the Boundaries of Fine-Grained Object Classification Using fMRI Decoding in Human Occipito-Temporal Cortex.

CONFERENCE PRESENTATIONS

Jordan MC, Greene MR, Beck DM, Fei-Fei L. (2016). Sequential Warping of Neural Representations According to Cognitive Principles Across the Ventral Stream. *Society for Neuroscience Annual Meeting (SfN)*.

Jordan MC, Greene MR, Beck DM, Fei-Fei L. (2016). Category Boundaries and Typicality Warp the Neural Representation Space of Real-World Categories. *Cognitive Neuroscience Society Annual Meeting (CNS)*.

Jordan MC, Greene MR, Beck DM, Fei-Fei L. (2016). Typicality Sharpens Category Boundaries in Object-Selective Cortex. *Stanford University Bio-X Interdisciplinary Initiatives (IIP) Symposium*.

Jordan MC, Joulin A, Beck DM, Fei-Fei L. (2015). Locally-Optimized Inter-Subject Alignment of Functional Cortical Regions. *Machine Learning and Interpretation in Neuroimaging (MLINI) Workshop, NIPS*.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2015). Typicality Sharpens Neural Representation in Object-Selective Cortex. *Society for Neuroscience Annual Meeting (SfN)* **(Oral) (Professional Development Award)**.

Iordan MC, Fannjiang C, Beck DM, Fei-Fei L. (2015). Pushing the Boundaries of Fine-Grained Object fMRI Decoding in Human Visual Cortex. *Organization for Human Brain Mapping Annual Meeting (OHBM)*.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2015). Category Boundaries and Typicality Warp the Neural Representation Space of Real-World Categories. *Vision Sciences Society Annual Meeting (VSS)* **(Oral) (Travel Award)**.

Fannjiang C, **Iordan MC**, Beck DM, Fei-Fei L. (2015). Pushing the Boundaries of Fine-Grained Object Classification Using fMRI Decoding in Human Visual Cortex. *Vision Sciences Society Annual Meeting (VSS)*.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2015). Typicality Sharpens Neural Representation in Object-Selective Cortex. *Cognitive Neuroscience Society Annual Meeting (CNS)* **(Oral) (Travel Award)**.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2015). Basic Level Category Structure Emerges Gradually Across Human Ventral Visual Cortex. *Bay Area Vision Research Day (BAVRD)*.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2014). Cohesion and Distinctiveness in Human Visual Cortex Favor Basic Level Representations. *Society for Neuroscience Annual Meeting (SfN)* **(Oral) (Travel Award)**.

Iordan MC, Joulin A, Beck DM, Fei-Fei L. (2014). Locally-Optimized Inter-Subject Alignment of Functional Cortical Regions. *Vision Sciences Society Annual Meeting (VSS)* **(Oral)**.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2014). Cohesion and Distinctiveness in Human Visual Cortex Favor Basic Level Representations. *Stanford Center for Biomedical Imaging Symposium Annual Meeting (CBIS)* **(Oral)**.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2014). Real-World Objects Acquire Basic-Level Advantage in Occipito-Temporal Cortex. *Biomedical Computation at Stanford University (BCATS)* **(Best Poster Award Runner-Up)**.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2013). Real-World Objects Acquire Basic-Level Advantage in Occipito-Temporal Cortex. *Bay Area Vision Research Day (BAVRD)*.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2013). Object Typicality Sharpens Neural Representation in Object-Selective Cortex. *Vision Sciences Society Annual Meeting (VSS)* **(Oral)**.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2013). Real-World Objects Acquire Basic-Level Advantage in Occipito-Temporal Cortex. *Cognitive Neuroscience Society Annual Meeting (CNS)*.

Baldassano C, **Iordan MC**, Beck DM, Fei-Fei L. (2012). Discovering Voxel-Level Functional Connectivity Between Cortical Regions. *Machine Learning and Interpretation in Neuroimaging (MLINI) Workshop, NIPS* **(Oral)**.

Iordan MC, Greene MR, Beck DM, Fei-Fei L. (2012). Neural Representations of Object Categories at Multiple Taxonomic Levels. *Vision Sciences Society Annual Meeting (VSS)* **(Oral)**.

Baldassano C, **Iordan MC**, Beck DM, Fei-Fei L. (2011). Fine-Grained Functional Connectivity using Spatial Regularization. *Machine Learning and Interpretation in Neuroimaging (MLINI) Workshop, NIPS*.

Iordan MC, Baldassano C, Beck DM, Fei-Fei L. (2011). Translation Invariance of Natural Scene Categories. *Vision Sciences Society Annual Meeting (VSS)* **(Oral)**.

Baldassano C, **Iordan MC**, Beck DM, Fei-Fei L. (2011). Decoding Objects Undergoing Contextual Violations. *Vision Sciences Society Annual Meeting (VSS)*.

INVITED TALKS

Cognitive Utility Effects on Neural Dimensions of Object Categorization. <i>University of California, Berkeley — Psychology Department Seminar.</i>	Feb 2016
Uncovering the Neural Representation of Multiple Dimensions of Object Categorization. <i>Princeton University — Princeton Neuroscience Institute Seminar.</i>	Sep 2015
Basic Level Category Structure Emerges Gradually Across Human Ventral Visual Cortex. <i>Stanford University — Psychology Department Vision Lunch Seminar.</i>	Jan 2015
Cohesion and Distinctiveness in Visual Cortex Favor Basic Level Representations. <i>Cañada College — STEM Speaker Series.</i>	Oct 2014
Typicality Sharpens Neural Representations in Object-Selective Cortex. <i>University of Rochester — Brain and Cognitive Sciences Department Seminar.</i>	Aug 2013
Real-World Objects Acquire Basic Level Advantage in Occipito-Temporal Cortex. <i>University of California, Berkeley — Vision Science Department Annual Retreat.</i>	Dec 2012

TEACHING EXPERIENCE

Guest Lectures

Networks and Hierarchical Processing: Object Recognition in Human and Computer Vision <i>Stanford University. CS 131. Computer Vision and Applications</i>	Dec 2014
A Primer on Human Vision: Insights and Inspiration for Computer Vision <i>Stanford University. CS 131. Computer Vision and Applications</i>	Oct 2014

Course Assistant | Stanford University

Taught discussion sections, held office hours, graded assignments, assisted students with problem sets and code. Assignments included Matlab programming and extensive theoretical proofs.

CS 131. Computer Vision, 50 students	Fall 2014
CS 229. Machine Learning, 460 students	Fall 2011

Teaching Assistant | Williams College

Assisted students with coding assignments held informal meetings and consulting hours, graded student work. Assignments included extensive theoretical proofs and programming in Java, C, C++, Lisp, ML, Smalltalk, and Assembly language.

CS 334. Programming Languages, 30 students	Spring 2009
CS 361. Theory of Computation, 25 students	Fall 2008
CS 334. Programming Languages, 30 students	Spring 2008

MATH 211. Linear Algebra, 60 students	Spring 2008
CS 361. Theory of Computation, 20 students	Fall 2007
MATH 211. Linear Algebra, 60 students	Spring 2007
CS 237. Microarchitecture, 35 students	Fall 2006
MATH 211. Linear Algebra, 120 students	Fall 2006

MENTORING AND OUTREACH

Undergraduate Research Mentor

Taught one-on-one "Introduction to Computational Neuroimaging" weekly tutorial sessions, supervised undergraduate research.

Clara Fannjiang, Stanford University 2014 - 2015

Project: "Fine-Grained fMRI Decoding of Object Categories in Visual Cortex"

SAILORS: Stanford AI Lab Outreach Summer Program

Summer camp program for high school students designed to spark interest in the STEM fields for underrepresented minorities and foster personal growth through career development workshops, mentoring, and social events.

Personal Growth Session Organizer: Scientific Communication 2015

Dinner with a Scientist - Community Outreach Program

Scientists from Bay Area schools develop a hands-on activity based on their research to share with groups of 4th and 5th grade students.

"Visual Illusions: What You See and What's Really There" 2014 - 2015

STAR: Science Teaching through Art

Science graduate students and postdocs are trained to showcase their research in a visually engaging and artistic manner. Interactive teaching poster sessions focus on encouraging local high school and community college students to pursue careers in science research.

Program Coordinator 2014

Secured program funding: VPGE CEG Grant (\$2,500), VPGE SPICE Grant (\$700)

Developed and organized workshops, outreach events, and poster sessions

Presenter, Best Poster Award, Best Presenter Award 2013

SPLASH - Teaching and Outreach Program

Volunteer instructors design and teach their own class to middle school and high school students.

"The Art of Effective Communication: A Primer on Telling a Good Story" 2013 - 2014

SERVICE

Conference Program Committee: *Pattern Recognition in NeuroImaging (PRNI) 2016*

Volunteer Reviewer

Neuroscience & Psychology: *Journal of Neuroscience*, *NeuroImage*, *PloS Computational Biology*, *Pattern Recognition in Neuroimaging (PRNI)*, *Psychonomic Bulletin and Review*

Computer Vision & Machine Learning: *Advances in Neural Information Processing Systems (NIPS)*, *European Conference on Computer Vision (ECCV)*, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*

Stanford University Vision Lab IRB Protocol Director	2015 - 2016
Stanford University Computer Science Graduate Admissions, <i>Ph.D. Student Buddy</i>	2012 - 2014
Williams College Student Mathematics and Statistics Advisory Board (SMASAB)	2007 - 2008
Williams College Computer Science Student Advisory Committee (CoSSAC)	2006 - 2008