Judith E. Fan

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Academic Positions

2023 –	*Assistant Professor*, Psychology, Stanford University
2019—2023	*Assistant Professor*, Psychology, University of California, San Diego
	Affiliated Faculty, Neurosciences Graduate Program, Halıcıoğlu Data Science Institute, The Design Lab, Computational Social Sciences Program
2017—2019	*Postdoctoral Scholar*, Psychology, Stanford University
2016	*Postdoctoral Research Associate*, Neuroscience Institute, Princeton University

Education

2011—2016	*PhD*, Psychology, Princeton University
2006—2010	*AB*, Neurobiology and Statistics, Harvard College
	summa cum laude

Selected Honors

2021	Outstanding Faculty Mentorship Award, UC San Diego Graduate Student Association
2017	Robert J. Glushko Prize for Outstanding Doctoral Dissertation, Cognitive Science Society
2017	Finalist for the NIH Director's Early Independence Award
2015	Computational Modeling Paper Prize in Perception & Action, Cognitive Science Society
2013	Early Graduate Student Researcher Award, American Psychological Association
2013	Object Perception, Attention, and Memory (OPAM) Student Travel Award
2009	Phi Beta Kappa, Harvard University
2007-2008	John Harvard Scholar, Harvard University (top 5% of class)
2006-2007	Harvard College Scholar, Harvard University (top 10% of class)
2006	Presidential Scholar, U.S. Department of Education (1 of 2 selected from state)

Research Grants

2023-2024 Generative AI & the Future of Learning Seed Grant
Source: Stanford Accelerator for Learning and Stanford Institute for Human-Centered Artificial Intelligence (HAI)
Title: Generating descriptions of data visualizations to improve accessibility and learning outcomes in STEM education
Role: co-PI (w/ Chris Potts & Elisa Kreiss)

2022-2023 School of Social Sciences Research Grant
Source: UC San Diego
Title: Measuring, modeling, and improving graph comprehension
Role: PI

2021-2026 Faculty Early Career Development Program (CAREER) Award
Source: National Science Foundation
Title: Mechanisms enabling the flexible expression of visual concepts
Role: PI

2021-2024 Science of Autonomy Research Grant
Source: Office of Naval Research
Title: Harnessing human intelligence for adaptive human-robot collaboration
Role: co-PI, w/ Dorsa Sadigh (PI)

2021-2023 Hoffman-Yee Research Grant
Source: Stanford Institute for Human-Centered Artificial Intelligence
Title: Curious, self-aware AI agents to build cognitive models and understand developmental disorders
Role: co-PI, w/ Daniel Yamins (PI), Mike Frank, Nick Haber, & Dennis Wall (co-PIs)

2020-2021 Course Development and Instructional Improvement Program Grant
Source: UC San Diego
Title: Enhancing the Psychology core methods curriculum: a new emphasis on computational literacy, open-science practices, and project-based collaboration
Role: PI, with Emma Geller and Celeste Pilegard (co-PIs)

2015-2016 Council of the Humanities David A. Gardner '69 Magic Project Grant
Source: Princeton University
Title: Drawing as a window into the mind
Role: PI, with Nick Turk-Browne (co-PI)

Fellowships

2015-2016 Cognitive Science Graduate Student Fellowship, Princeton University
2015-2016 Cognitive Science Graduate Research Grant, Princeton University
2015-2016 Council on Science and Technology Research Grant, Princeton University
2013-2016 Graduate Research Fellowship, National Science Foundation
2011-2012 Andrew W. Mellon Foundation Research Fellowship in Cultural Policy, Princeton University

2011-2012	Walker McKinney '50 Life Sciences Fellowship, Princeton University
2010-2011	Michael C. Rockefeller Foundation Memorial Fellowship, Harvard University
2009	Mary G. Roberts Mind/Brain/Behavior Thesis Fellowship, Harvard University
2009	Program for Research in Science and Engineering Fellowship, Harvard University
2008	Weissman International Internship Program Fellowship, Harvard University
2008	Lowe Career Decision Loan Fund Recipient, Harvard University
2007	Museum of Comparative Zoology Grants-in-Aid Recipient, Harvard University
2007-2009	Harvard College Research Program Fellowship, Harvard University
2006-2010	T.W. Lewis Foundation Scholar *&* Robert C. Byrd Scholar

Publications

under review	McCarthy, W., Kirsh, D., and **Fan, J.** (*under review*). Shared biases in reasoning about physical assembly.
under review	Lu, X., Wang, X., and **Fan, J.**. (*under review*). The photo-sketch correspondence problem: a new benchmark and a self-supervised approach.
under review	Long, B., **Fan, J.**, Chai, Z., and Frank, M. (*under review*). Parallel developmental changes in children's drawing and recognition of visual concepts.
under review	Long, B., Wang, Y., Christie, S., Frank, M., and **Fan, J.** (*under review*). Developmental changes in drawing production under different memory demands in a U.S. and Chinese sample.
under review	Allen, K., Brändle, F.,... **Fan, J.**, ... Schulz, E. (*under review*). Using games to understand the mind.
in press	Gweon, H., **Fan, J.**, Kim, B. (*in press*). Beyond imitation: Machines that understand and are understood by humans. *Philosophical Transactions of the Royal Society A*.
in press	**Fan, J.**, Bainbridge, W., Chamberlain, R., and Wammes, J. (*in press*). An integrated framework for understanding drawing as a cognitive tool. *Nature Reviews Psychology*.
2023	Hawkins, R., Sano, M., Goodman, N., and **Fan, J.** (2023). Visual resemblance and interaction history jointly constrain pictorial meaning. *Nature Communications*.
2023	Huey, H., Lu, X., Walker, C. and **Fan, J.** (2023). Explanatory drawings prioritize functional properties at the expense of visual fidelity. *Cognition*.
2022	Wong*, C., McCarthy*, W., Grand*, G., Friedman, Y., Tenenbaum, J., Andreas, J., Hawkins, R., and Fan, J. (2022). Identifying concept libraries from language about object structure. *Proceedings of the 44th Annual Meeting of the Cognitive Science Society*.
2022	Brockbank*, E., Wang*, H., Yang, J., Mirchandani, S., Erdem Bıyık, E., Sadigh, D., and Fan, J. (2022). How do people incorporate advice from artificial agents when making physical judgments? *Proceedings of the 44th Annual Meeting of the Cognitive Science Society*.
2022	Huey*, H., Long*, B., Yang, J., George, K., and Fan, J. (2022). Developmental changes in the semantic part structure of drawn objects. *Proceedings of the 44th Annual Meeting of the Cognitive Science Society*.

2022   Wang, H., Allen, K., Vul, E., and Fan, J. (2022). Generalizing physical prediction by composing forces and objects. *Proceedings of the 44th Annual Meeting of the Cognitive Science Society.*

2022   Wang, H., Yang, J., Tamari, R., and Fan, J. (2022). Communicating understanding of physical dynamics in natural language. *Proceedings of the 44th Annual Meeting of the Cognitive Science Society.*

2021   *Bear, D., *Wang, E., *Mrowca, D., *Binder, F., Tung, H.-Y., RT, P, Holdaway, C., Tao, S., Smith, K., Sun, F.-Y., Li, F.-F., Kanwisher, N., Tenenbaum, J., **Yamins, D., and **Fan, J.** (2021). Physion: Evaluating physical prediction from vision in humans and machines. *In Advances in Neural Information Processing Systems (Datasets & Benchmarks Track) 2021.*

2021   Binder, F., Mattar, M., Kirsh, D. and **Fan, J.** (2021). Visual scoping operations for physical assembly. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   Holdaway, C., Bear, D., Radwan, S., Frank, M., Yamins, D., and **Fan, J.** (2021). Measuring and predicting variation in the interestingness of physical structures. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   Holt, S., Barner, D., and **Fan, J.** (2021). Improvised numerals rely on 1-to-1 correspondence. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   Huey, H., Walker, C., and **Fan, J.** (2021). How do the semantic properties of visual explanations guide causal inference? *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   Kachergis, G., Radwan, S., Long, B., **Fan, J.**, Lingelbach, M., Bear, D., Yamins, D., and Frank, M. (2021). Predicting children's and adults' preferences in physical interactions via physics simulation. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   *McCarthy, W., *Hawkins, R., Wang, H., Holdaway, C., and **Fan, J.** (2021). Learning to communicate about shared procedural abstractions. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   McCarthy, W., Mattar, M., Kirsh, D. and **Fan, J.** (2021). Connecting perceptual and procedural abstractions in physical construction. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   Wang, H., Polikarpova, N., and **Fan, J.** (2021). Learning part-based abstractions for visual object concepts. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   Wang, H., Vul, E., Polikarpova, N., and **Fan, J.** (2021). Theory acquisition as constraint-based program synthesis. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2021   Yang, J. and **Fan, J.** (2021). Visual communication of object concepts at different levels of abstraction. *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

2020   McCarthy, W., Holdaway, C., Hawkins, R., and **Fan, J.** (2020). Emergence of compositional abstractions in human collaborative assembly. *NeurIPS Workshop on Object Representations for Learning and Reasoning.*

2020   McCarthy, W., and **Fan, J.** (2020). Rapid policy updating in human physical construction. *ICML Workshop on Object-Oriented Learning: Perception, Representation, and Reasoning.*

2020   Wang, H., and **Fan, J.** (2020). Library learning for structured object concepts. *ICML Workshop on Object-Oriented Learning: Perception, Representation, and Reasoning.*

2020   McCarthy W., Kirsh D., & **Fan J.** (2020). Learning to build physical structures better over time. *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society.*

2020   **Fan J.**, Wammes J., Gunn J., Yamins D., Norman K., Turk-Browne N. (2020). Relating visual production and recognition of objects in human visual cortex. *Journal of Neuroscience.*

2020   Xu T., **Fan J.**, & Dow S. (2020). Schema and metadata guide the collective generation of relevant and diverse insights. *Proceedings of the 8th AAAI Conference on Human Computation and Crowdsourcing.*

2020   **Fan J.**, Hawkins R., Wu M., & Goodman N. (2020). Pragmatic inference and visual abstraction enable contextual flexibility during visual communication. *Computational Brain & Behavior.*

2019   Achlioptas, P., **Fan J.**, Hawkins R., Guibas L., & Goodman N. (2019). ShapeGlot: Learning language for shape differentiation. *International Conference on Computer Vision (ICCV).*

2019   Hawkins R.*, Sano, M.*, Goodman N., & **Fan J.** (2019). Graphical convention formation during visual communication. *Proceedings of the 41st Annual Meeting of the Cognitive Science Society. * equal contribution; Sayan Gul Travel Award*

2019   Mukherjee K., Hawkins R.., & **Fan J.** (2019). Communicating semantic part information in drawings. *Proceedings of the 41st Annual Meeting of the Cognitive Science Society.*

2019   Long B., **Fan J.**, Chai R., & Frank M. (2019). Developmental changes in the ability to draw distinctive features of object categories. *Proceedings of the 41st Annual Meeting of the Cognitive Science Society.*

2019   **Fan J.**, Dinculescu M., & Ha D. (2019). Collabdraw: An environment for collaborative sketching with an artificial agent. *Proceedings of the 2019 ACM SIGCHI Conference on Creativity and Cognition.*

2018   Cullen S., **Fan J.**, van der Brugge E., & Elga A. (2018). Improving analytical reasoning and argument understanding: A quasi-experimental field study of argument visualization. *npj Science of Learning.*

2018   **Fan J.**, Yamins D., & Turk-Browne, N. (2018) Common object representations for visual production and recognition. *Cognitive Science.*

2018   Long, B., **Fan J.**, & Frank M. (2018) Drawing as a window into developmental changes in object representations. *Proceedings of the 40th Annual Conference of the Cognitive Science Society.*

2016   **Fan J.**, Hutchinson, J., and Turk-Browne, N. (2016) When past is present: Substitutions of long-term memory for sensory evidence in perceptual judgments. *Journal of Vision.* 16(8), 1-12.

2016   **Fan J.** and Turk-Browne, N. (2016) Incidental biasing of attention from long-term memory. *Journal of Experimental Psychology: Learning, Memory, & Cognition.* 42(6), 970-977.

2016   **Fan J.**, Turk-Browne, N., & Taylor, J. (2016) Error-driven learning in statistical summary perception. *Journal of Experimental Psychology: Human Perception and Performance*, 42(2), 266–280.

2015   **Fan J.**, Yamins D., & Turk-Browne, N. (2015) Common object representations for visual recognition and production. *Proceedings of the 37th Annual Meeting of the Cognitive Science Society.*

2015   **Fan J.** (2015) Drawing to learn: how producing graphical representations enhances scientific thinking. *Translational Issues in Psychological Science.* 1(2), 170-181.

2014   **Fan J.** and Suchow, J. (2014) The crowd is self-aware. *Behavioral and Brain Sciences*, 37(1), 81-82.

2013   **Fan J.** and Turk-Browne, N. (2013) Internal attention to features in visual short-term memory guides object learning. *Cognition*, 129(2), 292-308.

2013   **Fan J.**, Turk-Browne, N., & Taylor, J. (2013) Feedback-driven tuning of statistical summary representations. *Visual Cognition*, 21(6), 685-689.

2013   **Fan J.** (2013) Can ideas about food inspire real social change? The case of Peruvian gastronomy. *Gastronomica*, 13(2), 31-42.

2010   Strange B., Kroes M., **Fan J.**, & Dolan R. (2010) Emotion causes targeted forgetting of established memories. *Frontiers in Behavioral Neuroscience.* 4, 1-13.

2009   Sharot T., Shiner T. Brown A., **Fan J.**, & Dolan, R. (2009) Dopamine enhances expectation of pleasure in humans. *Current Biology*, 24(19), 2077-1080.

Invited Talks

2023   Learning to communicate about shared procedural abstractions
Computational Summer School on Modeling Social and collective behavior (COSMOS), July 2023.

2023   How do visual content and communicative context determine pictorial meaning?
Workshop on Imagistic Cognition, May 2023.

2023   How do visual content and communicative context determine pictorial meaning?
Studies in Language, Information, Meaning, and Expression, May 2023.

2023   Discovering abstractions that bridge perception, action, and communication
Workshop on Neurosymbolic Generative Models at ICLR, May 2023.

2023   Cognitive technologies for uncovering useful abstractions
University of California, Santa Cruz, March 2023.

2023   Discovering abstractions that bridge perception, action, and communication
Invited Symposium on "Learning and generalization in humans and machines"at Cognitive Neuroscience Society, March 2023.

2023   Cognitive technologies for uncovering useful abstractions
University of California, Santa Barbara, March 2023.

2023   Cognitive technologies for uncovering useful abstractions
Carnegie Mellon University, February 2023.

2023   Cognitive tools for uncovering useful abstractions
University of Oregon, January 2023.

2022   Towards human-like understanding of 3D physical scenes
ECCV: Language for 3D Scenes Workshop, October 2022.

2022   Physion: Evaluating physical prediction from vision in humans and machines
ECCV: Visual object-oriented Learning meets Interaction (VOLI) Workshop, October 2022.

2022   Cognitive technologies for uncovering useful abstractions
University of California, Merced, September 2022.

2022	Cognitive technologies for uncovering useful abstractions
	Diverse Intelligences Summer Institute, August 2022.
2022	Cognitive tools for uncovering useful abstractions
	Max-Planck Institute for Biological Cybernetics, July 2022.
2022	Learning to communicate about shared procedural abstractions
	CVPR: Artificial Social Intelligence Workshop, June 2022.
2022	Physion: Evaluating physical prediction in humans and machines
	CVPR: Graph Machine Learning for Visual Computing Tutorial, June 2022.
2022	Cognitive tools for uncovering useful abstractions
	University of California, Irvine, April 2022.
2022	Cognitive tools for uncovering useful abstractions
	University of Wisconsin-Madison, March 2022.
2022	Cognitive tools for uncovering useful abstractions
	Dartmouth College, February 2022.
2022	Cognitive tools for uncovering useful abstractions
	Stanford University, February 2022.
2022	Cognitive tools for uncovering useful abstractions
	University of California, Los Angeles, January 2022.
2021	Visual content and social context jointly determine pictorial meaning
	Psychonomics Symposium: Beyond the Button Press: Studying the Mind Through Drawings, November 2021.
2021	Cognitive tools for learning and communication
	Configural Processing Consortium Keynote Talk, November 2021.
2021	Cognitive tools for learning and communication
	University of Edinburgh Computational Cognitive Science Seminar, October 2021.
2021	Cognitive technologies for visual communication
	CogSci 2021 Workshop: Symbolic and sub-symbolic systems in people and machines, July 2021.
2021	Drawing games as a window into concepts, communication, and collaboration.
	CogSci 2021 Workshop: Using games to understand intelligence, July 2021.
2021	Cognitive technologies for making the invisible visible
	Diverse Intelligences Summer Institute, July 2021.
2021	Relating visual production and recognition in human visual cortex.
	Wellcome Trust Centre for Neuroimaging, June 2021.
2021	Cognitive tools for making the invisible visible.
	Workshop on Sketch-Oriented Deep Learning, CVPR, June 2021.
2021	Cognitive tools for learning and communication.
	Nokia Bell Labs, February 2021.
2021	Cognitive tools for learning and communication.
	Department of Cognitive, Linguistic & Psychological Sciences, Brown University, February 2021.
2020	Cognitive tools for learning and communication.
	Institute for Cognitive Science, University of Michigan, December 2020.

2020	Cognitive tools for making the invisible visible.
	Department of Philosophy, University of Southern California, June 2020.
2020	Emergence of graphical communication protocols.
	Robotics: Science & Systems Workshop: Emergent Behaviors in Human-Robot Systems, July 2020.
2020	Cognitive tools for making the invisible visible.
	ICLR Workshop on Bridging AI and Cognitive Science, Addis Ababa, Ethiopia, April 2020.
2019	Cognitive tools for learning and communication.
	Design @ Large, UC San Diego, La Jolla, CA, May 2019.
2019	Cognitive tools for learning and communication.
	Halıcıoğlu Data Science Institute, UC San Diego, La Jolla, CA, January 2019.
2018	Cognitive tools for learning and communication.
	Hult International Business School, San Francisco, CA, April 2018.
2018	Drawing as a window into the mind.
	Netflix, Los Gatos, CA, April 2018.
2018	Cognitive tools for learning and communication.
	University of California Berkeley, Berkeley, CA, February 2018.
2018	Cognitive tools for learning and communication.
	University of California San Diego, La Jolla, CA, January 2018.
2018	Cognitive tools for learning and communication.
	Indiana University, Bloomington, IN, January 2018.
2017	Drawing as a window into the mind.
	Rhode Island School of Design, Providence, RI, November 2017.
2017	Role of cognitive actions in learning.
	Annual Meeting of the Cognitive Science Society, London, UK, July 2017.
2016	Drawing as a window into the mind.
	Princeton University Art Museum, Princeton, NJ, October 2016.
2016	Drawing as cognitive technology.
	Drawing and the Brain Symposium, Indiana University Center for Art + Design, Bloomington, IN, April 2016.
2016	Drawing to learn: how visual production refines object representations.
	Indiana University in Bloomington, IN, April 2016.
2015	Drawing as a window into learning.
	Educational Testing Service, Princeton, NJ, October, 2015.
2015	Common object representations for visual recognition and production.
	University of British Columbia, Vancouver, BC, March, 2015.
2015	Drawing as a window into the mind.
	Smart Design, New York City, NY, March, 2015.
2013	Can ideas about food lead to real social change?
	Princeton Woodrow Wilson School Bernstein Gallery Art Exhibit on "Cooking for Change", Princeton, NJ, May 2013.
2011	Apégate a la causa! La gastronomía peruana como fenómeno social total.
	Faculty of Social Sciences, Pontificia Universidad Católica del Perú, Lima, Peru, July 2011.

Conference Presentations

2023	ICLR Workshop on Neurosymbolic Generative Models.
2023	Cognitive Neuroscience Society.
2022	Cognitive Science Society.
2022	Computer Vision and Pattern Recognition (CVPR).
2022	Society for Philosophy and Psychology Annual Meeting.
2021	Annual Meeting of the Psychonomic Society.
2021	Cognitive Science Society.
2021	Computer Vision and Pattern Recognition (CVPR).
2021	Society for Philosophy and Psychology Annual Meeting.
2020	Robotics: Science & Systems Workshop: Emergent Behaviors in Human-Robot Systems.
2020	Cognitive Science Society.
2020	ICML Workshop on Object-Oriented Learning: Perception, Representation, and Reasoning.
2020	ICLR Workshop on Bridging AI and Cognitive Science.
2019	Cognitive Science Society. *Sayan Gul Travel Award.*
2019	Society for Philosophy and Psychology Annual Meeting.
2019	ACM SIGCHI Conference on Creativity and Cognition.
2018	Vision Sciences Society.
2018	Society for Neuroscience.
2017	Vision Sciences Society.
2017	Cognitive Science Society. *Glushko Dissertation Prize.*
2016	Vision Sciences Society.
2015	Vision Sciences Society.
2015	Cognitive Science Society. *Computational Modeling Paper Prize.*
2014	Vision Sciences Society.
2014	ACM SIGGRAPH.
2013	Vision Sciences Society.
2013	Annual Meeting on Object Perception, Attention, and Memory (OPAM). *Student Travel Award*
2013	Annual Meeting of the Psychonomic Society.
2012	Vision Sciences Society.
2012	New School for Social Research Sociology Conference.
2010	Vision Sciences Society.

Advising

Students

UC San Diego

Graduate Students

2019 —	Haoliang Wang
2019 —	Holly Huey (co-advised by Caren Walker)

2019 —	Will McCarthy (co-advised by David Kirsh)
2019 —	Sebastian Holt (co-advised by David Barner)
2020 —	Felix Binder (co-advised by David Kirsh)
2020 — 2022	Cameron Holdaway (co-advised by Ed Vul)
2021 —	Hannah Lloyd (co-advised by Celeste Pilegard)
2022 —	Lauren Oey (co-advised by Ed Vul)
2022 —	Erik Brockbank (co-advised by Ed Vul)

Qualifying Exam Committee

2021	Mohan Gupta
2021	Yang Wang
2021	Cameron Holdaway
2021	James Qi
2022	Hyojeong (Jenny) Yoo

Dissertation Committee

2022	Helen Wang (UCSD, Neuroscience)
2022	Elias Wang (Stanford, Electrical Engineering)
2023	Zheng Guo (UCSD, Computer Science & Engineering)
2023	Tone Xu
2023	Sunyoung Park
2023	Isabella DeStefano
2023	James Qi
2023	Aubrey Lau

Selected Undergraduates

2019 — 2022	Justin Yang, Honors: *UCSD Chancellor's Research Scholarship, HDSI Research Scholarship, Triton Research & Experiential Learning Scholarship*
2019 —	Xuanchen Lu, Honors: *UCSD Psychology Research Perseverence During COVID Award*
2019—20	Julia Xu, Honors: *HDSI Research Scholarship*
2020 — 2023	Sirui Tao, Honors: *HDSI Research Scholarship*
2020 — 2021	Zhe Huang, Honors: *Triton Research & Experiential Learning Scholarship*
2021 — 2022	Jane Yang, Honors: *Triton Research & Experiential Learning Scholarship*
2022 —	Zoe Tait, Honors: *UCSD Chancellor's Research Scholarship*

Stanford

Renata Chai (Master's, Stanford, 2018-19), Xin Yuan (Master's, Tsinghua University, 2018-19), Kushin Mukherjee (undergraduate, Vassar, 2018-19), Megumi Sano (undergraduate, Stanford, 2018-19; *Sayan Gul Travel Award*), Karl Mulligan (undergraduate, Rutgers, 2017)

Princeton

Laura Herman (undergraduate, Princeton, 2015-16), Jessica Ji (undergraduate, Princeton, 2016), Jordan Gunn (undergraduate, Princeton, 2015), Rachel Klebanov (undergraduate, Princeton, 2015), Ryan O'Connell (undergraduate, Princeton, 2013-14), Annie Chen (undergraduate, Carnegie Mellon, 2013), Max Luo (undergraduate, University of Pennsylvania, 2012–2013)

<small>APPOINTMENTS</small>

2017-2018	Stanford Center for the Study of Language & Information, Mentor
2012–2016	Princeton Wilson College, Resident Graduate Advisor
2015-2016	Princeton Cognitive Science Program Graduate Student Fellow
2013-2014	Princeton Psychology Senior Thesis Writing Group Leader

Teaching

<small>UC SAN DIEGO</small>

Instructor-of-Record

2022	PSYC 201A: Quantitative Methods in Psychology, Instructor
2022	PSYC 60: Introduction to Statistics, Instructor
2022	PSYC 193L: Science of Learning Data Science, Instructor
2021	PSYC 230: Computational Approaches to Visual Abstraction, Instructor
2021	PSYC 60: Introduction to Statistics, Instructor
2021	PSYC 230: Computational Approaches to Visual Abstraction, Instructor
2020	PSYC 193: Perception & Computation, Instructor
2020	PSYC 60: Introduction to Statistics, Instructor
2019	PSYC 272: Computational Approaches to Visual Abstraction, Instructor

Guest Lectures

2021	PSYC 523b: Cognitive Psychology (Yale)
2021	PHIL 281: Non-Linguistic Representation (UCLA)
2020	NEU 200C: Basic Neuroscience
2020	PSYC 111A: Research Methods
2020	COGS 200: Faculty Research Seminar

Professional Service

2020	UCSD Marshall College Commencement Representative
2020-	UCSD Pathways2AI Initiative, Co-Founder
2020-	UCSD Psychology Undergraduate Research Assistant Common Application Initiative, Co-Chair

SERVICE TO THE FIELD

Workshops Organized

2022	ECCV Workshop: 1st Challenge on Machine Visual Common Sense: Perception, Prediction, Planning
2022	CogSci Workshop: Images2Symbols: Drawing as as Window into the Mind
2022	CCN Generative Adversarial Collaboration: To what extent does the brain simulate the external world?
2022	CogSci Discussion Group: Neural Network Models of Cognition
2022	CVPR Sketch Deep Learning Workshop

Program and Awards Committees

2020-2023	Program Committee, Cognitive Science Society
2022	Program Committee, Cognitive Computational Neuroscience (CCN) Meeting
2021	Program Committee, Conference on the Theory and Application of Diagrams
2021	Program Committee, ACM Creativity and Cognition
2020	Program Committee, NeurIPS Object Representations for Learning and Reasoning Workshop
2020	Program Committee, ICML Object-Oriented Learning Workshop
2020	Awards Committee, Cognitive Science Society

Mentorship

| 2020 | Mentor, Científico Latino Graduate Student Mentorship Initiative |
| 2019-2022 | Faculty Mentor, Cognitive Science Society Annual Meeting |

Editorial Service

Guest Editor, Memory & Cognition

Grant Reviewing

Panelist, NSF Integrative Strategies for Understanding Neural and Cognitive Systems (NCS)
Panelist, NSF Perception, Action & Cognition
Panelist, NSF Cognitive Neuroscience
Panelist, NSF EDU Core Research

Journal Reviewing

Cognition
Cognitive Research: Principles and Implications
Cognitive Science
Developmental Science
Frontiers in Psychology
Gastronomica
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Human Perception and Performance
MIT Handbook of Attention
Nature Human Behaviour
PLoS Computational Biology
Proceedings of the National Academy of Sciences
Psychonomic Bulletin & Review
Psychological Review
Quarterly Journal of Experimental Psychology
Thinking Skills & Creativity
Translational Issues in Psychological Science

Conference Reviewing

ACM Creativity and Cognition, ACM SIGGRAPH, Conference on the Theory and Application of Diagrams

Affiliations

Cognitive Science Society (2015–), Association for Psychological Science (2014–), American Psychological Association (2011–), Vision Sciences Society (2010–), Society for Neuroscience (2008–), American Association for the Advancement of Science (2008–), Association for Computing Machinery (2019–)

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