Judith E. Fan

Assistant Professor
Department of Psychology
University of California, San Diego
La Jolla, CA 92093 U.S.A.

email: jefan@ucsd.edu
URL: https://cogtoolslab.github.io

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

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 **Fan, J.**, Bainbridge, W., Chamberlain, R., and Wammes, J. (*under review*). A mechanistic framework for understanding drawing as a cognitive tool.

under review Huey, H., Lu, X., Walker, C. and **Fan, J.** (*under review*). Explanatory drawings prioritize functional properties at the expense of visual fidelity.

under review Hawkins, R., Sano, M., Goodman, N., and **Fan, J.** (*under review*). Visual resemblance and communicative context constrain the emergence of graphical conventions.

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 Lu, X., Wang, X., and **Fan, J.**. (*under review*). The photo-sketch correspondence problem: a new benchmark and a self-supervised approach.

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.*

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 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
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.

Selected Conference Presentations

2021 McCarthy W., Kirsh D., *&* Fan J. (2021). Exploring the role of prototyping in physical construction. Poster to be presented at the *Society for Philosophy and Psychology Annual Meeting.*

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

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

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

2019 Fan J. *&* Hawkins R. (2019). Visual content and social context jointly determine pictorial meaning. Poster presented at the *Society for Philosophy and Psychology Annual Meeting.*

2019 Fan J., Dinculescu M., *&* Ha D. (2019). collabdraw: an environment for collaborative sketching with an artificial agent. Poster presented at the *2019 ACM SIGCHI Conference on Creativity and Cognition.*

2019 Hawkins R.*, Sano, M.*, Goodman N., Fan J. (2019). Graphical convention formation during visual communication. Talk presented at 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. Poster presented at 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. Talk presented at the *41st Annual Meeting of the Cognitive Science Society.*

2018 Fan J., Hawkins R., Wu M., *&* Goodman, N. Modeling contextual flexibility in visual communication. Talk presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL May 2018.*

2018 Long, B., Fan J., *&* Frank, M. Drawing as a window in the development of object category representations. Talk presented at the *Cognitive Science Society Annual Meeting in Madison, WI July 2018.*

2018 Long, B., Fan J., *&* Frank, M. Drawing as a window in the development of object category representations. Poster presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL May 2018.*

2018 Wammes, J., Fan, J., Lee R., Gunn J., Yamins,, D. Norman K., *&* Turk-Browne, N. Changing object representations during visual production training. Poster presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL May 2018.*

2017 Fan J., Yamins D., *&* Norman, K., *&* Turk-Browne, N. Consequences of visual production on object representations. Dynamic poster presented at the *Society for Neuroscience Annual Meeting in Washington, DC, November, 2017.*

2017 Fan J., Yamins D., *&* Turk-Browne, N. Visual production induces categorical perception. Poster presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL May 2017.*

2016 Fan J., Yamins D., & Turk-Browne, N. Dynamic visual feedback is sufficient to improve drawing. Poster presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL May 2016.*

2015 Fan J., Yamins D., & Turk-Browne, N. Common object representations for visual recognition and production. Talk given at *Cognitive Science Society Annual Meeting in Pasadena, CA July 2015.* * *Computational Modeling Paper Prize in Perception & Action*

2015 Fan J., Yamins D., & Turk-Browne, N. How drawing alters object representations. Poster presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL May 2015.*

2014 Fan J., Yamins D., DiCarlo, J., & Turk-Browne, N. Mapping core similarity among visual objects across image modalities. Poster presented at *ACM SIGGRAPH 2014 in Vancouver, BC, Canada, August 2014.*

2014 Fan J. & Turk-Browne, N. Feature distributions constrain object perception. Poster presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL, May 2014.*

2014 Everaert, J., Fan, J., Koster, E., & Turk-Browne, N. Attentional capture from emotional associations in long-term memory. Poster presented at the *Vision Sciences Society Annual Meeting in St. Pete's Beach, FL, May 2014.*

2013 Fan, J., Turk-Browne, N., & Taylor, J. Feedback-driven tuning of statistical summary representations. Talk given at the *Annual Meeting on Object Perception, Attention, and Memory in Toronto, Ontario, Canada, November 2013.* * *Student Travel Award*

2013 Fan, J., Hutchinson, J., & Turk-Browne, N. Incidental expression of visual long-term memory in online perception. Poster presented at the *Annual Meeting of the Psychonomic Society in Toronto, Ontario, Canada, November 2013.*

2013 Fan, J. and Turk-Browne, N. Visual long-term memory for objects biases perceptual attention. Poster presented at the *Vision Sciences Society Annual Meeting in Naples, FL, May 2013.*

2012 Fan, J. and Turk-Browne, N. Accessing visual memory distorts object representations. Talk given at the *Vision Sciences Society Annual Meeting in Naples, FL, May 2012.*

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
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 — 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 — Sirui Tao, Honors: *HDSI Research Scholarship*
2020 — Zhe Huang, Honors: *Triton Research & Experiential Learning Scholarship*
2021 — 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), 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)

Appointments

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

UC San Diego

Instructor-of-Record

2023 PSYC 60: Introduction to Statistics, Instructor
2022 PSYC 193L/230: Computational Approaches to Visual Abstraction, 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

Service to the University and Broader Community

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

2022	Co-Organizer, ECCV Workshop: 1st Challenge on Machine Visual Common Sense: Perception, Prediction, Planning
2022	Co-Organizer, CogSci Workshop: Images2Symbols: Drawing as as Window into the Mind
2022	Co-Organizer, CCN Generative Adversarial Collaboration: To what extent does the brain simulate the external world?
2022	Co-Organizer, CogSci Discussion Group: Neural Network Models of Cognition
2022	Co-Organizer, CVPR Sketch Deep Learning Workshop
2022	Guest Editor, Memory & Cognition
2020-2022	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	Mentor, Científico Latino Graduate Student Mentorship Initiative
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
2019-2022	Faculty Mentor, CogSci Society Annual Meeting

Panelist or Ad Hoc Reviewer

Grants

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

Journals

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
PLoS Computational Biology
Proceedings of the National Academy of Sciences
Psychonomic Bulletin & Review
Psychological Review

Quarterly Journal of Experimental Psychology
Translational Issues in Psychological Science

Conferences

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

Editorial Service

Memory & Cognition

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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