

# Catherine Wong

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<https://web.mit.edu/zyzzyva/www/academic.html>

## Education

- 2018- Massachusetts Institute of Technology  
Ph.D. in Brain and Cognitive Science  
Adviser: Josh Tenenbaum
- 2018 Stanford University  
M.S. in Computer Science
- 2017 Stanford University  
B.A. in Computer Science *with Honors*, Minor in Creative Writing  
Academic Adviser: Dan Jurafsky  
Thesis Adviser: Sebastian Thrun  
Thesis: “Feature-Conditioned Neural Network Pre-training for Skin Cancer Classification”

## Employment

- 2018 Research Assistant, Stanford Computational Vision and Geometry Lab
- 2017 Research Intern, Google Research
- 2017 Research Assistant, Thrun Lab at Stanford
- 2016 Software Engineering Intern, Flatiron Health
- 2015 Software Engineering Intern, Palantir Philanthropy
- 2015 Software Engineering Intern, Google Classroom
- 2014 Software Engineering Intern, Google[x]

## Honors

- 2018 MIT, Singleton Presidential Graduate Fellowship
- 2017 Stanford, Siebel Scholar
- 2017 Stanford, Wegbreit Prize for best undergraduate honors thesis in CS
- 2017 Stanford, Terman Engineering Award (Top 5% Engineering)
- 2016 Tau Beta Pi Engineering Honor Society
- 2014 Stanford President’s Award for Academic Excellence
- 2013 Intel Science Talent Search National Finalist
- 2012 Research Science Institute Scholar

## Publications and Manuscripts in Preparation

- 2022 C. Wong\*, W. McCarthy\*, G. Grand\*, et. al, “Identifying concept libraries from language about object structure”, *CogSci*.
- 2022 K. Collins\*, C. Wong\*, J. Feng, M. Wei, J. Tenenbaum, “Structured, flexible, and robust: benchmarking and improving large language models towards more human-like behavior in out-of-distribution reasoning tasks”, *CogSci (oral)*

- 2021 C. Wong, K. Ellis, J. Andreas, J. Tenenbaum, “Leveraging language to learn program abstractions and search heuristics”, *ICML*
- 2021 K. Ellis, C. Wong, M. Nye, et. al, “DreamCoder: bootstrapping inductive program synthesis with wake-sleep library learning”, *PLDI*.
- 2021 C. Wong, Y. Friedman, J. Andreas, J. Tenenbaum, “Language as a bootstrap for compositional visual reasoning.”, *CogSci*.
- 2020 C. Wong, K. Ellis, J. Andreas, J. Tenenbaum, “Natural language for program search and abstraction learning”. *AAAI Symposium on Conceptual Abstraction (oral)*
- 2020 S. Acquaviva, Y. Pu, C. Wong, et. al, “Concept grounding of ARC with iterated human communications”, *AAAI Symposium on Conceptual Abstraction*.
- 2020 K. Ellis, C. Wong, M. Nye, et. al, “DreamCoder: Growing generalizable, interpretable knowledge with wake-sleep Bayesian program learning”. *Preprint, ArXiv*.
- 2019 C. Wong, K. Ellis, M. Sablé-Meyer, J. Tenenbaum, “Modeling expertise with neurally-guided Bayesian program induction”. *CogSci*.
- 2019 J. Gauthier\*, J. Loula\*, E. Pollock\*, T. Wilson\*, C. Wong\*, “From mental representations to neural codes: a multi-level approach”. *Behavioral Brain Sciences (BBS)*.
- 2018 C. Wong, N. Houlsby, Y. Lu, A. Gesmundo. “Transfer learning with AutoML”. *NeurIPS*.
- 2015 JF. Regan, N. Kamitaki, T. Legler, S. Cooper, N. Klitgord, G. Karlin-Neumann, C. Wong, S. Hodges, R. Koehler, S. Tzonev, and S. McCarroll. “A rapid molecular approach for chromosomal phasing”. *PLOS One*.
- 2012 C. Wong. “Cell-phone compatible wireless stethoscope.” U.S. Patent Application No. 13/326,927.

\* Indicates equal contribution.

## Teaching

- 2020 Teaching Assistant, Computational Cognitive Science, MIT
- 2019 Teaching Assistant, Topics in Infant and Early Childhood Cognition, MIT

## Professional Service

- 2020- Institute Committee on Race and Diversity, MIT
- 2019- Brain and Cognitive Sciences Philosophy Circle, Co-organizer, MIT
- 2016 Engineers for a Sustainable World, Ghana Hermio Project Team Lead, Stanford
- 2015 Engineers for a Sustainable World, Medic Mobile Project Team Lead, Stanford

## Fiction and Sound

- 2020 Bayou Magazine, “Clear”
- 2019 Shenandoah, “In Residence”
- 2018 The Cimarron Review, “Feeding Jobs”
- 2018 Chicago Quarterly Review, “Tomorrow Never Knows”
- 2017 Nancy (WNYC), “Fear of Being Butch”  
WNYC News, “Find the Lead-Tainted Water Fountains in NYC Schools”
- 2013 Popshot Magazine, “Exhilaration”, “Winged”
  
- 2019 Glimmer Train Magazine, January/February Fiction Open Winner, “Clear”
- 2016 Kalanithi Fiction Prize, “Parlor Talk”
- 2014 Stanford Undergraduate Fiction Prize, “In Residence”
- 2013 U.S. Presidential Scholar in the Arts, Creative Writing
  
- 2018 Stanford Storytelling Project, Senior Producer
- 2017 WNYC Studios, Production Intern

### **Et Cetera**

- 2018 “Latitudes”, serial audio documentary about biking across America in 2018.
- 2017 Stanford Arts Grant, “Undocumented”, multimedia installation on American visa applications.

Languages: English (Native), Spanish (Fluent), Cantonese (Mostly movies)