

Jason K. Chow

Curriculum Vitae

Graduate Student
Department of Psychology
Vanderbilt University

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Education

Vanderbilt University, PhD in Psychological Sciences 2018-present
Area: Cognition and Cognitive Neuroscience
Co-Advised: Dr. Thomas Palmeri and Dr. Isabel Gauthier
Thesis: Modeling Individual Differences in High-Level Visual Cognition using DNNs

University of Toronto, St. George, BS Honors in Psychology 2014-2018
Major: Psychology - specialist

Honors and Awards

Pat Burns Memorial Graduate Student Research Award 2022
OPAM Best Poster Award 2017
OPAM Travel Award 2017
ASSU Individual Academic Endeavour Grant 2017
President's Entrance Scholarship 2014

Research Interests

Individual differences; visual cognition; haptic perception; auditory perception; multi-modal perception; object recognition and categorization; computational modeling; deep neural networks; AI; cognitive neuroscience; fMRI

Research Experience

CATLAB 2018-present
Advisor: Dr. Thomas Palmeri
Position: Graduate student
Project: Deep learning models of visual object recognition and individual differences

Object Perception Lab 2018-present
Advisor: Dr. Isabel Gauthier
Position: Graduate student
Project: Multimodal object recognition and individual differences

MackLab 2016 - 2018

Advisor: Dr. Michael Mack
 Position: Research assistant
 Project: Object substitution masking and categorization
 Project: Development and validation of 3D stimulus set

HasherLab 2017-2018

Advisor: Dr. Lynn Hasher
 Position: Research assistant
 Project: Mere exposure of faces and older adults

Ad-Hoc Reviewer

Annual Meeting of the Cognitive Science Society; Conference on Cognitive Computational Neuroscience; Memory & Cognition; Nature Human Behaviour; Scientific Reports; Annals of the New York Academy of Sciences

Publications and Manuscripts (* denotes equal contribution)

- Chow, J. K.**, Palmeri, T. J. (2023). Manipulating and measuring variation in DNN representations [working title]. *Manuscript in preparation*.
- Chow, J.K.**, Palmeri, T. J., & Gauthier, I. (2023). Distinct but related abilities for visual and haptic object recognition. *Manuscript under review*.
- Chow, J.K.**, Palmeri, T. J., Pluck, G., & Gauthier, I. (2023). Evidence for an amodal domain-general object recognition ability. *Manuscript under review*.
- Smithson C.J.R*, **Chow, J.K***, Chang, T-. Y., Gauthier, I. (2023). Measuring object recognition ability: reliability, validity, and the aggregate z-score approach. *Manuscript under review*.
- Chow, J. K.**, Palmeri, T. J., & Mack, M. L. (2022). Revealing a competitive dynamic in rapid categorization with object substitution masking. *Attention, Perception, & Psychophysics*, 84(3), 638–646. <https://doi.org/10.3758/s13414-022-02442-1>
- Chow, J. K.**, Rhodes, S., Rule, N. O., Buchsbaum, B. R., & Hasher, L. (2022). Absence of a mere-exposure effect in older and younger adults. *Psychology and Aging*. 37(6), 742–748. <https://doi.org/10.1037/pag0000702>
- Chow, J. K.**, Palmeri, T. J., & Gauthier, I. (2022). Visual object recognition ability is not related to experience with visual arts. *Journal of Vision*, 22(7), 1. <https://doi.org/10.1167/jov.22.7.1>
- Chow, J. K.**, Palmeri, T. J., & Gauthier, I. (2022). Haptic object recognition based on shape relates to visual object recognition ability. *Psychological Research*, 86, 1262–1273 <https://doi.org/10.1007/s00426-021-01560-z>
- Chow, J.**, Palmeri, T., & Gauthier, I. (2020). Tactile object recognition performance on graspable objects, but not texture-like objects, relates to visual object recognition ability. *Journal of Vision*, 20(11), 188-188. <https://doi.org/10.1167/jov.20.11.188>

Conference Presentations and Talks

- Smithson C.J.R., **Chow, J.K.**, Chang, T.-Y., Gauthier, I. (2023). Measuring Object Recognition Ability: Reliability, Validity, and the Aggregate z-score Approach. Talk presented at: 23rd Annual Meeting of the Vision Sciences Society; May 2023; St. Pete Beach, FL.
- Chow, J.K.**, Back to basic: o across modalities. Talk presented at: *Cognition and Cognitive Neuroscience Colloquium*; Dec 2022; Nashville, TN.
- Chow, J.** & Palmeri, T. (2022). Manipulating and Measuring Variation in DNN Representations. Poster presented at: *2022 Conference on Cognitive Computational Neuroscience*; Aug 2022; San Francisco, CA.
- Chow, J.K.**, Palmeri, T.J. & Gauthier, I. (2022). Haptic object recognition abilities correlate across feature types and with visual object recognition ability. Poster presented at: 22nd Annual Meeting of the Vision Sciences Society; May 2022; St. Pete Beach, FL.
- Chow, J.K.**, Representational variability in deep neural networks for understanding individual differences in visual perception. Talk presented at: *Cognition and Cognitive Neuroscience Colloquium*; Nov 2021; Nashville, TN.
- Chow, J.K.**, Haptic object recognition relates to visual object recognition ability. Talk presented at: *Cognition and Cognitive Neuroscience Colloquium*; Oct 2020; Nashville, TN.
- Chow, J. K.**, Palmeri, T. J., Gauthier, I. (2019). Individual differences in tactile object recognition. Talk presented at: *Vanderbilt Psychology First Year Graduate Student Talks*; Apr 2019; Nashville, TN.
- Chow, J. K.**, Mack, M.L. (2017). Object substitution masking reveals a competitive dynamic between levels of categorization. Poster presented at: *OPAM XXV*; Nov 2017; Vancouver, BC.

Outreach

- Gauthier, I., & Chow, J.K. (2022). People vary a lot in how well they recognize, match or categorize the things they see – researchers attribute this skill to an ability they call ‘o’. *The Conversation*. <https://theconversation.com/people-vary-a-lot-in-how-well-they-recognize-match-or-categorize-the-things-they-see-researchers-attribute-this-skill-to-an-ability-they-call-o-182100>

Teaching Experience

Principles of Experimental Design (Teaching Assistant)	Fall 2018, Spring 2020, Spring 2023
Scientific Computing for Psychological and Brain Sciences (Grader)	Fall 2020, Fall 2022
Brain Damage and Cognition (Teaching Assistant)	Spring 2021
Computational Neuroscience (Teaching Assistant)	Fall 2021
Computational Neuroscience (Technical Assistant)	Spring 2021
General Psychology (Teaching Assistant)	Spring 2019