

Education

- 2016 – Current **Doctor of Philosophy** – Psychology
Brown University in Providence, USA
PhD Supervisors: Drs. Amitai Shenhav & Michael J. Frank
- 2014 – 2016 **Master of Science** – Psychology (Cognitive and Behavioral Neuroscience)
University of Western Ontario in London, CA
MSc. Supervisor: Dr. Ingrid Johnsrude
Thesis: *The effects of concurrent cognitive load on the processing of clear and degraded speech.*
- 2010 – 2014 **Bachelor of Science (Honors) with Distinction** - Psychology
Queen's University in Kingston, CA
Honors Thesis Supervisor: Dr. Ingrid Johnsrude
Thesis: *Attention enhances phase-locking in the brainstem frequency-following response.*

Accolades & Funding

- 2019 – 2020 **Carney Graduate Award in Brain Science**, Brown University (\$55,000 USD)
- 2019 **Cognitive Science Society Travel Award** (\$500 USD)
- 2018 – 2019 **Eimas Graduate Research Award**, Brown University (\$1,000 USD)
- 2014 **Certificate of Academic Excellence**, Canadian Psychological Association
- 2011 **Summer Work Experience Program**, Queen's University (\$2,500 CAD)
- 2010 – 2014 **Dean's Honor List**, Queen's University
- 2010 – 2014 **Foresters Competitive Scholarship** (\$8,000 CAD)
- 2010 **Queen's University Excellence Scholarship** (\$2,000 CAD)

Peer-Reviewed Publications

- Ritz, H.**, Frömer, R. & Shenhav, A. (2020). Bridging motor and cognitive control: It's about time! (Spotlight). *Trends in Cognitive Sciences*. 24(1), 6–8.
- Nassar, M.R., McGuire, J.T., **Ritz, H.**, & Kable, J. (2019). Dissociable forms of uncertainty-driven representational change across the human brain. *Journal of Neuroscience*, 39(9), 1688-1698.
- Ritz, H.**, Nassar, M.R., Frank, M.J., & Shenhav, A. (2018). A control theoretic model of adaptive behavior in dynamic environments. *Journal of Cognitive Neuroscience*, 30(10), 1405-1421.

Manuscripts Under Review or In Revision

- Ritz, H.**, Wild, C., & Johnsrude, I. Parametric cognitive load reveals hidden costs in the neural processing of perfectly intelligible degraded speech. Preprint: doi.org/10.1101/2020.10.02.324509.
- Leng, X., Yee, D., **Ritz, H.**, & Shenhav, A. Dissociable influences of reward and punishment on adaptive cognitive control. Preprint: doi.org/10.1101/2020.09.11.294157.
- Rmus, M., **Ritz, H.**, Hunter, L.E., Bornstein, A.M., & Shenhav, A. Individual differences in model-based planning are linked to the ability to infer latent structure. Preprint: doi.org/10.1101/723072.

Manuscripts in Preparation

Ritz, H., & Shenhav, A. Parametric control of distractor-oriented attention.

Peer-Reviewed Conference Proceedings

Ritz, H., DeGutis, J., Frank M.J., Esterman, M., & Shenhav, A. (2020). An evidence accumulation model of motivational and developmental influences over sustained attention. *In Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Toronto, CA. [Poster].

Leng, X., **Ritz, H.**, Yee, D., & Shenhav, A. (2020). Dissociable influences of reward and punishment on adaptive cognitive control. *In Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*. Toronto, CA. [Poster]

Ritz, H. & Shenhav, A. (2019). Parametric control of distractor-oriented attention. *In Proceedings of the 41st Annual Meeting of the Cognitive Science Society*. Montreal, CA. [Talk].

Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A. (2019). Decisions about reward and effort for the learning and control of dynamical systems. *In 4th Multidisciplinary Conference on Reinforcement Learning and Decision Making*. Montreal, CA. [Poster].

Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A. (2017). Behavioral evidence for PID-like feedback control. *In 3rd Multidisciplinary Conference on Reinforcement Learning and Decision Making*. Ann Arbor, USA. [Poster and Poster Spotlight Talk].

External Seminar Series Talks

Jan. 2021	P6 Series, Princeton University. Princeton, USA. [forthcoming]
Feb. 2020	ConCats Series, New York University. New York, USA.
Feb. 2019	P6 Series, Princeton University. Princeton, USA.
May 2018	CBC Series, Universitat Pompeu Fabra. Barcelona, ES.

External Lab Meeting Talks

Nov. 2020	Jazayeri Lab Meeting, Massachusetts Institute of Technology, Cambridge, USA.
Oct. 2020	Schultz Lab Meeting, Max Planck Institute for Biological Cybernetics. Tübingen, DE.
Sept. 2020	Kool Lab Meeting, University of Washington in St. Louis. St. Louis, USA.
Aug. 2020	Collins Lab Meeting, University of California Berkeley. Berkeley, USA.
May 2020	McGuire Lab Meeting, Boston University. Boston, USA.
Apr. 2020	Hayden Lab Meeting, University of Minnesota. Twin Cities, USA.
Mar. 2020	Donner Lab Meeting, Hamburg University. Hamburg, DE.

Conference Presentations

Ritz, H., Hayden, B., Shenhav, A., Yoo, S.B., Optimal control of approach-avoidance dynamics.
- *Neuromatch 3.0* (2020). Online. [Talk].

Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A., Optimal decision-making in metric space.
- *Society for Neuroeconomics* (2020). Online. [Poster and Poster Spotlight Talk].

Ritz, H., & Shenhav, A. Parametric control of distractor-oriented attention.
- *Motivational and Cognitive Control* (2019). Berlin, DE. [Poster].
- *Control Processes* (2019). Providence, USA. [Poster].
- *Cognitive Neuroscience Society* (2018). Boston, USA. [Poster].

Rmus, M., **Ritz, H.**, Hunter, L., Bornstein, A., & Shenhav, A. Model-based decision-making is associated with structure inference ability.

- *Reinforcement Learning and Decision Making* (2019). Montreal, CA. [[Workshop Talk](#)].
- *Society for Neuroeconomics* (2018). Philadelphia, USA. [Talk by M.R.].

Ritz, H., DeGutis, J., Frank M.J., Esterman, M., & Shenhav, A. Modeling motivational influences on sustained attention.

- *Winter Conference on Brain Research* (2019). Snowmass, USA. [Poster].
- *Society for Neuroeconomics* (2018). Philadelphia, USA. [Poster].

Ritz, H., Dean Wolf, C., Frömer, R., & Shenhav, A. Quantifying the demands of value-based decision-making with short-term memory interference.

- *Cognitive Neuroscience Society* (2019). San Francisco, USA. [Poster].

Ritz, H., Nassar, M.R., Frank, M.J., & Shenhav, A. Behavioral evidence for PID-like feedback control.

- *Society for Neuroscience* (2017). Washington, USA. [[Nanosymposium Talk](#)].
- *New England Research in Decision-Making* (2017). Providence, USA. [[Talk](#)].
- *Brown Mind Brain Research Day* (2017). Providence, USA. [Poster].

Ritz, H., Wild, C., & Johnsrude, I.J. The effects of concurrent cognitive load on the processing of clear and degraded speech.

- *Organization for Human Brain Mapping* (2016). Geneva, CH. [Poster].

Ritz, H., Arbuckle, S., Wild, C., & Johnsrude, I.J. Enhanced recognition memory for acoustically degraded sentences.

- *Association for Research in Otolaryngology* (2015). San Diego, USA. [Podium Talk by I.J.].
- *Brain and Mind Institute Symposium* (2015). London, CA. [Poster].

Ritz, H. & Johnsrude, I.J. Attention enhances phase-locking in the frequency following response.

- *Canadian Society of Brain, Behaviour, and Cognitive Science*. (2014). Toronto, CA. [Poster].
- *McMaster University NeuroXchange Conference* (2014). Hamilton, CA. [Poster].

Competitive Research Courses

Summer 2019	Kavli Summer Institute in Cognitive Neuroscience , Santa Barbara, USA.
Summer 2017	Methods in Neuroscience at Dartmouth , Hanover, USA.

Service Roles

2020 – 2021	Departmental Colloquium Committee , Brown University
2018 – 2019	Cognition Seminar Series Organiser , Brown University
2017 – 2018	Psychology Graduate Student Representative , Brown University
2017 – 2020	APDA Optimism Walk Participant , Brown University
2017 – 2019	Brown Brain Week Participant , Brown University
2015 – 2016	Psychology Graduate Student Representative , Western University
2015 – 2016	Psychology Colloquium Committee , Western University
2013 – 2014	Psychology Undergraduate Student Council , Queen's University

Teaching

Spring 2019	fMRI: Theory and Practice , Brown University, TA
Spring 2018	Cognitive Neuropsychology , Brown University, TA
Fall 2017	Social Psychology , Brown University, TA
2015 – 2016	Statistics using Computers (full year) , Western University, TA
2014 – 2015	Sensation and Perception (full year) , Western University, TA
2012 – 2013	Introduction to Psychology (full year) , Queen's University, TA

Mentorship

2019 – current	Alessandra Bianco (RA)
2019 – current	Christopher Bravo (RA)
2019 – 2020	Jennifer Dzul (honors thesis: <i>Are Distractors really that Distracting? A Closer Look into Target vs Distractor Sensitivity in Older Adults</i>)
2019 – 2020	Natalie Knowles (RA)
2019	Savannah Doelfel (RA)
2017 – 2019	Allison Loynd (RA)
2017 – 2018	Milena Rmus (honors thesis: <i>Model-based decision-making is associated with structure inference ability</i>)
2017	William McNelis (RA)
2016 – 2017	Kia Sadahiro (RA)
2015 – 2016	Jessica Uthayakumar (honors thesis: <i>Consequences of acoustic degradation and semantic context on recognition memory</i>)

Pre-Graduate Research Experience

2013 – 2014	Research Assistant, Queen's University. PI: Dr. Ingrid Johnsrude
2011 – 2012	Research Assistant, Queen's University. PI: Dr. Monica Castelhana
Summer 2010	Research Assistant, Juravinski Cancer Centre. PI: Dr. Jehonathan Pinthus

Ad Hoc Reviewer

Journal of Neuroscience, Computational Brain & Behavior