

## Jared M. Hotaling

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### Academic Experience and Positions

University of New South Wales

Postdoctoral Fellow, School of Psychology, 2017-Present

University of Basel

Postdoctoral Research Scientist, Center for Economic Psychology, 2013-2016

Indiana University

Dual Ph.D., Psychological and Brain Sciences, Cognitive Science, November 2013

Dissertation: *Decision field theory-planning: A cognitive model of planning and dynamic decision making* (awarded Outstanding Research Award)

- Dissertation Committee: Jerome R. Busemeyer, Richard M. Shiffrin, Peter M. Todd, & Robert M. Nosofsky

Brown University

Lab Manager, Virtual Environment Navigation Laboratory, Brown University, 2006-2007

Lehigh University

B.A., with honors, Psychology, Cognitive Science, May 2006

Thesis I: *Rethinking rationality: An analysis of conflicting models of human reasoning*

- Advisor: John B. Gatewood

Thesis II: *The effect of regulatory focus on decision making*

- Advisor: Barbara C. Malt

### Awards and Grants

Major Awards and Grants

2016 - International Exploratory Workshop, Swiss National Science Foundation, *Sequential Sampling Models of Decision Making* (CHF 16,000)

2015 - Bruno de Finetti Prize, European Association for Decision Making

2014 - Outstanding Research Award, Cognitive Science Program, Indiana University

2008 - NSF Graduate Research Fellowship

2006 - President's Scholarship, Lehigh University

2006 - Williams Senior Writing Prize (3<sup>rd</sup> Prize), Lehigh University

2005 - NSF Research Experience for Undergraduates Scholarship, University of Wisconsin

Other Awards

2016 - NSF Young Scientist Travel Award

2013, 2014, 2016, 2019 - Society for Mathematical Psychology Conference Participation Award  
2011 - NSF Graduate Research Travel Award  
2008-2012 - Society for Mathematical Psychology Student Travel Award

## Publications

### Working Papers

- Hotaling, J. M.**, Navarro, D. J., & Newell, B. R. (revise & resubmit, 2<sup>nd</sup> round). Skilled bandits: Learning to choose in a reactive world. *Manuscript available upon request.*
- Vanunu, Y., **Hotaling, J. M.**, & Newell, B. R. (revise & resubmit). Elucidating the differential impact of extreme-outcomes in perceptual and preferential choice. *Manuscript available upon request.*
- DeCaro, D. A., **Hotaling, J. M.**, & Johnson, J. G. (revise & resubmit). Accounting for procedural utility: When decision procedures alter the evaluation of outcomes in consequentialist choice. *Manuscript available upon request.*
- Hotaling, J. M.**, Gluth, S., & Rieskamp, J. (in preparation). Comparing models of choice deferral and information sampling in risky decision making. *Manuscript available upon request.*

### Journal Articles

- Hotaling, J. M.**, Jarvstad, A., Donkin, C., & Newell, B. R. (accepted). How to change the weight of rare events in decisions from experience. *Psychological Science.*
- Hotaling, J. M.** (accepted). Decision field theory-planning: A cognitive model of planning on-the-fly. *Decision*. Advance online publication. <http://dx.doi.org/10.1037/dec0000113>
- Hotaling, J. M.** & Rieskamp, J. (2019). A quantitative test of computational models of multialternative context effects. *Decision*. 6(3), 201-222.
- Spektor, M. S., Kellen, D., & **Hotaling, J. M.**, (2018). When the good looks bad: An experimental exploration of the repulsion effect. *Psychological Science*. 29(8), 1309-1320.
- Gluth, S., **Hotaling, J. M.**, & Rieskamp, J. (2017). The attraction effect modulates reward prediction errors and intertemporal choices. *Journal of Neuroscience*. 37(2), 371-382.
- Hotaling, J. M.**, Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2015). The dilution effect and information integration in perceptual decision making. *PLoS ONE*, 10(9), e0138481.
- Hotaling, J. M.**, Busemeyer, J. R. (2012). DFT-D: a cognitive-dynamical model of dynamic decision making. *Synthese*, 189(1), 67-80.
- Hotaling, J. M.**, Busemeyer, J. R., & Li, J. (2010). Theoretical developments in decision field theory: Comment on Tsetsos, Chater, & Usher. *Psychological Review*, 117(4), 1294-1298.
- Slooman, S., Barbey, A. K., & **Hotaling, J. M.** (2009). A causal model theory of the meaning of *cause*, *enable*, and *prevent*. *Cognitive Science*, 33(1), 21-50.

## Refereed Conference Papers & Chapters

- Hotaling, J. M.**, Navarro, D. J., & Newell, B. R. (2018). Skilled bandits: Learning to choose in a reactive world. *Proceedings of the 40<sup>th</sup> Annual Meeting of the Cognitive Science Society*.
- Hotaling, J. M.**, Fakhari, P., & Busemeyer, J. R. (2015). Dynamic decision making. In J. D. Wright (Ed.), *International Encyclopedia of the Social and Behavioral Sciences* (2<sup>nd</sup> ed.) (pp. 709-714). Oxford: Elsevier.
- Mullinix, G., Gray, O., Colado, J., Veinott, E., Leonard, J., Papautsky, E.L., Argenta, C., Clover, M., Castronova, E., Todd, P.M., Ross, T., Lorince, J., **Hotaling, J.**, Hale, C., Whitaker, E., J., Hoffman, R., Flach, J., & Fox, O. (2013). Heuristica: Designing a serious game for improving decision making. *Proceedings of the 2013 IEEE International Games Innovation Conference (IGIC)*, (pp. 250-255). Vancouver, BC.
- Veinott, E., Leonard, J., Papautsky, E.L., Perelman, B. Stankovic, A., Lorince, J., **Hotaling, J.**, Ross, T., Todd, P., Busemeyer, J., Castronova, E., Hale, C., Catrambone, R., Whitaker, E., Fox, O., Flach, J., & Hoffman, R. (2013). The effect of camera perspective and session duration on training decision making in a serious video game. *Proceedings of the 2013 IEEE International Games Innovation Conference (IGIC)*, (pp. 256-262). Vancouver, BC.
- Hotaling, J. M.**, Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2013). Dilution effects in perceptual information integration. *Proceedings of the 35<sup>th</sup> Annual Meeting of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

## Presentations

### Selected Conference Presentations

- Hotaling, J. M.**, Donkin, C., Newell, B. R. (2019). New insights into decisions from experience: Using cognitive models to understand how value information, outcome order, and salience drive risk taking. *Annual Meeting of the Society for Mathematical Psychology*, Montreal, Canada.
- Hotaling, J. M.**, Donkin, C., Newell, B. R., & Jarvstad, A. (2019). New insights into decisions from experience: Using cognitive models to understand how value information, outcome order, and salience drive risk taking. *Annual Meeting of the Australasian Society for Experimental Psychology*, Wellington, New Zealand.
- Hotaling, J. M.**, Jarvstad, A., Donkin, C., & Newell, B. R. (2018). How to change the weight of rare events in decisions from experience. *Annual Meeting of the Psychonomic Society*, New Orleans, Louisiana.
- Hotaling, J. M.**, Jarvstad, A., Donkin, C., & Newell, B. R. (2018). How to change the weight of rare events in decisions from experience. *Annual Meeting of the Society for Judgment and Decision Making*, New Orleans, Louisiana.
- Hotaling, J. M.**, Jarvstad, A., Donkin, C., & Newell, B. R. (2018). How to change the weight of rare events in decisions from experience. *Annual Meeting of the Cognitive Science Society*, Madison, Wisconsin.
- Hotaling, J. M.**, Navarro, D. J., & Newell, B. R. (2018). Skilled bandits: Learning to choose in a reactive world. *Australian Mathematical Psychology Conference*, Perth, Australia.

- Hotaling, J. M.,** Gluth, S., & Rieskamp, J. (2017). Comparing rule-based and sequential sampling models of deferred decision making. *Australian Mathematical Psychology Conference*, Brisbane, Australia.
- Hotaling, J. M.** & Rieskamp, J. (2016). A critical test of sequential sampling models of multialternative context effects. *Seventh Annual Bernoulli Workshop*, Basel, Switzerland.
- Hotaling, J. M.,** Rieskamp, J., & Busemeyer, J. R. (2016). A critical test of sequential sampling models of multialternative context effects. *Annual Meeting of the Society for Mathematical Psychology*, New Brunswick, New Jersey.
- Hotaling, J. M.,** Rieskamp, J., & Gluth, S. (2016). Testing models of deferred decision making. *Miniconference on the Nature of Preferences and their Relation to Choice*, Potsdam, Germany.
- Hotaling, J. M.** (2015). Decision field theory-dynamic: A cognitive model of planning and multistage decision making. *Symposium on (Non-)Optimal Human Decision Making in Dynamic Environments*, Heidelberg, Germany.
- Hotaling, J. M.,** Busemeyer, J. R. (2013). Decision field theory-dynamic: A model of planning on-the-fly. *Annual Meeting of the Society for Mathematical Psychology*, Potsdam, Germany.
- Hotaling, J. M.,** Busemeyer, J. R. (2013). Decision field theory-dynamic: A model of planning on-the-fly. *Annual Summer Interdisciplinary Conference*, Cortina d'Ampezzo, Italy.
- Hotaling, J. M.,** Busemeyer, J. R. (2013). Decision field theory-dynamic: A model of planning on-the-fly. *Australian Mathematical Psychology Conference*, Sydney, Australia.
- Hotaling, J. M.,** Busemeyer, J. R. (2012). Decision field theory-dynamic: A cognitive model of dynamic decision making. *Annual Meeting of the Society for Mathematical Psychology*, Columbus, Ohio.
- Hotaling, J. M.,** Busemeyer, J. R., & Shiffrin, R. M. (2012). Decision field theory-dynamic: A cognitive model of dynamic decision making. *International Conference on Cognitive Science*, Kaliningrad, Russia.
- Hotaling, J. M.,** Busemeyer, J. R., & Shiffrin, R. M. (2012). Decision field theory-dynamic: A cognitive model of dynamic decision making. *Annual Summer Interdisciplinary Conference*, Cala Gonone, Italy.
- DeCaro, D. A., **Hotaling, J. M.,** & Johnson, J. G. (2012). Accounting for procedural utility: When decision procedures alter the evaluation of outcomes in consequentialist choice. *Midwestern Cognitive Science Conference*, Bloomington, Indiana.
- Hotaling, J. M.,** Busemeyer, J. R., & Shiffrin, R. M. (2012). The effect of variance on dynamic decision making. *Midwestern Cognitive Science Conference*, Bloomington, Indiana.
- Hotaling, J. M.,** Busemeyer, J. R., & Shiffrin, R. M. (2011). Models of multi-stage risky decision making. *Annual Meeting of the Society for Mathematical Psychology*, Boston, Massachusetts.
- Hotaling, J. M.,** Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2010). The dilution effect in perceptual decision making. *Annual Meeting of the Society for Judgment and Decision Making*, Saint Louis, Missouri.

- Hotaling, J. M.,** Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2010). Models of information integration in perceptual decision making. *Annual Meeting of the Society for Mathematical Psychology*, Portland, Oregon.
- Hotaling, J. M.,** Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2009). Information integration in perceptual decision making. *Annual Meeting of the Society for Mathematical Psychology*, Amsterdam, The Netherlands.
- Hotaling, J. M.,** Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2008). Information integration in perceptual decision making. *Annual Summer Interdisciplinary Conference*, Madonna di Campiglio, Italy.
- Hotaling, J. M.,** Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2008). Information integration: Towards and universal framework. *Red Hawk Mental Life Conference*, Oxford, Ohio.
- Hotaling, J. M.** (2006). Deliberation modes and regulatory focus: A new perspective on decision making. *Lehigh Valley Association of Independent Colleges Annual Psychology Conference*, Easton, Pennsylvania.

#### Invited Talks

- Hotaling, J. M.** (2018). Comparing models of choice deferral and information sampling in risky decision making. *Warwick Business School*, University of Warwick.
- Hotaling, J. M.** (2017). Using cognitive models to understand the decision making process. *Cognitive Science Department*, Rensselaer Polytechnic Institute.
- Hotaling, J. M.** (2017). Using cognitive models to understand the decision making process. *Center for Decision Research*, University of Leeds.
- Hotaling, J. M.** (2016). Using cognitive models to understand the decision making process. *Department of Psychology*, City University London.
- Hotaling, J. M.** (2015). Using cognitive models to understand the decision making process. *Department of Psychology*, Syracuse University.
- Hotaling, J. M.** (2015). Decision field theory-planning: A cognitive model of planning on the fly. *Subjective Probability, Utility, and Decision Making Conference*, Budapest Hungary.
- Hotaling, J. M.,** Rieskamp, J., & Gluth, S. (2015). Testing models of deferred decision making. *Center for Adaptive Rationality*, Max Plank Institute for Human Development, Berlin, Germany.
- Hotaling, J. M.,** Busemeyer, J. R. (2012). Decision field theory-dynamic: A cognitive model of dynamic decision making. *Cognitive Lunch Series*, Indiana University, Bloomington, Indiana.
- Hotaling, J. M.,** Busemeyer, J. R. (2012). Decision field theory-dynamic: A cognitive model of dynamic decision making. *Center for Economic Psychology*, University of Basel, Switzerland.
- Hotaling, J. M.,** Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2010). Information integration in perceptual decision making. *Cognitive Lunch Series*, Indiana University, Bloomington, Indiana.

## Symposia

- Otto, A. R., Knox, W.B., Love, B.C., Gershman, S., Niv, Y., Worthy, D. A., Maddox, W. T., **Hotaling, J. M.**, Busemeyer, J. R., & Shiffrin, R. M. (2011). Computational, Neuroscientific, and Lifespan Perspectives on the Exploration-Exploitation Dilemma. *Annual Meeting of the Cognitive Science Society*, Boston, Massachusetts.
- Gureckis, T. M., Markant, D., **Hotaling, J. M.**, Dimperio, E., Busemeyer, J. R., Lee, M. D., Zhang, S., Steyver, M., Love, B. C., Otto, A. R., Simon, D. A., & Daw, N. (2010). Symposium on Dynamic Decision Making. *Annual Meeting of the Cognitive Science Society*, Portland, Oregon.

## Poster Presentations

- Hotaling, J. M.**, Navarro, D. J., & Newell, B. R. (2018). Skilled bandits: Learning to choose in a reactive world. *Annual Meeting of the Cognitive Science Society*, Madison, Wisconsin.
- Hotaling, J. M.**, Navarro, D. J., & Newell, B. R. (2017). Skilled bandits: Learning to choose in a reactive world. *Annual Meeting of the Society for Judgment and Decision Making*, Vancouver, Canada.
- Hotaling, J. M.**, Jarvstad, A., Donkin, C., & Newell, B. R. (2017). The effects of outcome salience on decisions from experience. *Annual Meeting of the Psychonomic Society*, Vancouver, Canada.
- Hotaling, J. M.**, Rieskamp, J., & Gluth, S. (2016). Comparing rule-based and sequential sampling models of deferred decision making. *Annual Meeting of the Psychonomic Society*, Boston, Massachusetts.
- Hotaling, J. M.**, Rieskamp, J., & Gluth, S. (2016). Comparing rule-based and sequential sampling models of deferred decision making. *Annual Meeting of the Society for Judgment and Decision Making*, Boston, Massachusetts.
- Hotaling, J. M.**, Rieskamp, J., & Gluth, S. (2016). Testing models of deferred decision making. *Annual Meeting of the Psychonomic Society*, Chicago, Illinois.
- Gluth, S., **Hotaling, J. M.**, & Rieskamp, J. (2016). Modulating intertemporal choices and reward prediction errors by the attraction effect. *Workshop on Sequential Sampling Models of Decision Making*, Emmetten, Switzerland.
- Spektor, M. S., Kellen, D., & **Hotaling, J. M.**, (2016). The effect of incentives and framing on context effects in perceptual decision making: The repulsion effect. *Workshop on Sequential Sampling Models of Decision Making*, Emmetten, Switzerland.
- Hotaling, J. M.**, Rieskamp, J., & Gluth, S. (2015). Testing models of deferred decision making. *Annual Meeting of the Psychonomic Society*, Chicago, Illinois.
- Hotaling, J. M.**, Rieskamp, J., & Gluth, S. (2015). Testing models of deferred decision making. *Annual Meeting of the Society for Judgment and Decision Making*, Chicago, Illinois.
- Hotaling, J. M.**, Rieskamp, J. (2014). Testing models of deferred decision making. *Annual Meeting of the Society for Judgment and Decision Making*, Long Beach, California.
- Hotaling, J. M.**, Rieskamp, J. (2014). Testing models of deferred decision making. *Annual Meeting of the Society for Mathematical Psychology*, Quebec City, Canada.

- Hotaling, J. M.**, Busemeyer, J. R. (2013). Decision field theory-dynamic: A model of planning on-the-fly. *Annual Meeting of the Society for Judgment and Decision Making*, Toronto, Canada.
- Hotaling, J. M.**, Busemeyer, J. R. (2013). Decision field theory-dynamic: A model of planning on-the-fly. *Annual Meeting of the Psychonomic Society*, Toronto, Canada.
- Hotaling, J. M.**, Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2013). Models of information integration in perceptual decision making. *Annual Meeting of the Cognitive Science Society*, Berlin, Germany.
- Hotaling, J. M.**, Busemeyer, J. R., & Shiffrin, R. M. (2011). Planning in multistage decision making. *Annual Meeting of the Society for Judgment and Decision Making*, Seattle, Washington.
- Hotaling, J. M.**, Busemeyer, J. R., & Shiffrin, R. M. (2011). Planning in multistage decision making. *Annual Meeting of the Psychonomic Society*, Seattle, Washington.
- Hotaling, J. M.**, Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2010). Models of information integration in perceptual decision making. *Annual Meeting of the Cognitive Science Society*, Portland, Oregon.
- Hotaling, J. M.**, Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2010). Models of information integration in perceptual decision making. *Annual Summer Interdisciplinary Conference*, Bend, Oregon.
- Hotaling, J. M.**, Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2009). Information integration in perceptual decision making. *Annual Summer Interdisciplinary Conference*, Sarre, Italy.
- Cohen, A. L., Busemeyer, J. R., Shiffrin, R. M., & **Hotaling, J. M.** (2008). Information integration in perceptual decision making. *Annual Meeting of the Psychonomic Society*, Chicago, Illinois.
- Hotaling, J. M.**, Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2008). Information integration in perceptual decision making. *Annual Meeting of the Society for Mathematical Psychology*, Washington, D.C.
- Hotaling, J. M.** (2005). Multiple encoding of visual information in working memory. *Committee on Institutional Cooperation SROP Conference*, Madison, Wisconsin.

## Teaching

### University of Basel

Research Methodology (Undergraduate Level; Fall 2015, Spring 2016, Fall 2016)

Heuristic Strategies in Judgment & Decision Making (Graduate Level; Spring 2015, Spring 2016)

Learning & Decision Making (Graduate Level; Fall 2013, Spring 2014, Spring 2015)

### Indiana University

Choice Behavior (Guest Lecturer, Undergraduate Level; Fall 2012)

Experimental Methods in Psychology (Undergraduate Level; Spring 2010)

Decision-Making and the Brain (Guest Lecturer, Undergraduate Level; Spring 2009)

## **Research Supervision**

University New South Wales

Ph.D. Students, Newell Lab (2017-present)

Post-graduate honors students, Newell Lab (2017-present)

Undergraduate research intern, Newell Lab (2017-present)

University Basel

Ph.D. Students, Center for Economic Psychology (2013-2016)

Indiana University

Undergraduate honors students, Memory and Perception Lab (2010-2013)

IGERT Undergraduate Research Scholar, Judgment and Decision-Making Lab (Summer 2011)

Brown University

Undergraduate honors students, Virtual Environment Navigation Lab, 2006-2007

## **Ad hoc Reviewing**

PNAS, Psychological Review; Management Science; Psychonomic Bulletin & Review; Cognitive Psychology; Cognition; Journal of Behavioral Decision Making; Cognitive Science; Behavioral Research Methods; Journal of Experimental Psychology: Learning, Memory, and Cognition; Decision; Journal of Mathematical Psychology; Synthese; Proceeding of the Cognitive Science Society

## **Professional Affiliations**

Society for Judgment and Decision Making

Cognitive Science Society

Society for Mathematical Psychology

Psychonomic Society

August, 2019