

Jared M. Hotaling

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Professional Experience

University of Illinois, Urbana-Champaign
Assistant Professor, Department of Psychology, 2020-present

University of New South Wales
Postdoctoral Fellow, School of Psychology, 2017-2020

University of Basel
Postdoctoral Research Scientist, Center for Economic Psychology, 2013-2016

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

Education

Indiana University
Dual Ph.D., Cognitive Science, Psychology, November 2013
Dissertation: Decision field theory-planning: A cognitive model of planning and dynamic decision making
Supervisors: Jerome R. Busemeyer & Richard M. Shiffrin

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

Funding

2021 - Research Support Award, University of Illinois, Urbana-Champaign, *Understanding Consequential Inconsistency* (\$30,000)

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

Awards

Major Awards

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 (3rd 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

Peer-Reviewed Articles

Vanunu, Y., **Hotaling, J. M.**, Le Pelley, M. E., & Newell, B. R. (2021). How top-down and bottom-up attention modulate risky choice. *Proceedings of the National Academy of Sciences*, *118*(39).

Hotaling, J. M., Navarro, D. J., & Newell, B. R. (2021). Skilled bandits: Learning to choose in a reactive world. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *47*(6), 879-905.

DeCaro, D. A., DeCaro, M. S., **Hotaling, J. M.**, & Johnson, J. G. (2020). Procedural and economic utilities in consequentialist choice: Trading freedom of choice to minimize financial losses. *Judgment and Decision Making*, *15*(4), 517-533.

Vanunu, Y., **Hotaling, J. M.**, & Newell, B. R. (2020). Elucidating the differential impact of extreme-outcomes in perceptual and preferential choice. *Cognitive Psychology*, *119*.

Hotaling, J. M. (2020). Decision field theory-planning: A cognitive model of planning on the fly in multistage decision making. *Decision*, *7*(1), 20-42.

Hotaling, J. M., Jarvstad, A., Donkin, C., & Newell, B. R. (2019). How to change the weight of rare events in decisions from experience. *Psychological Science*, *30*(12), 1767-1779.

Hotaling, J. M. & Rieskamp, J. (2019). A quantitative test of computational models of multialternative context effects. *Decision*, *6*(3), 201-222.

Hotaling, J. M., Navarro, D. J., & Newell, B. R. (2018). Skilled bandits: Learning to choose in a reactive world. *Proceedings of the 40th Annual Meeting of the Cognitive Science Society*.

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., Cohen, A. L., Busemeyer, J. R., & Shiffrin, R. M. (2013). Dilution effects in perceptual information integration. *Proceedings of the 35th Annual Meeting of the Cognitive Science Society*.

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. In *2013 IEEE International games innovation conference (IGIC)* (pp. 250-255). IEEE.

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. In *2013 IEEE International games innovation conference (IGIC)* (pp. 256-262). IEEE.

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.

Sloman, 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.

Book Chapters

Hotaling, J. M., Busemeyer, J. R., & Rieskamp, J. (in press). Psychological research and theories of preferential choice. In S. Hess & A. Daly (Eds.), *Handbook of Choice Modeling* (2nd ed.). Cheltenham: Edward Elgar.

Hotaling, J. M., Kellen, D. (in press). Dynamic decision making: Empirical and theoretical directions. In K. D. Federmeier (Ed.), *Psychology of Learning and Motivation, Volume 76*.

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* (2nd ed.) (pp. 709-714). Oxford: Elsevier.

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.** (2021). Choice deferral in risky decision making: Using cognitive models to understand information sampling strategies. *Developmental Brownbag, Department of Psychology*, University Illinois, Urbana-Champaign.
- Hotaling, J. M.** (2021). Choice deferral in risky decision making: Using cognitive models to understand information sampling strategies. *Center for Cognitive Research in Social Psychology*, Heidelberg University.
- Hotaling, J. M.** (2020). MEM-EX: An exemplar memory model of decisions from experience. *Cognitive Brownbag, Department of Psychology*, University Illinois, Urbana-Champaign.
- Hotaling, J. M.** (2019). Taking decision making out of the vacuum: Using cognitive models to understand choice in complex environments. *Department of Psychology*, University of Illinois, Urbana-Champaign.
- Hotaling, J. M.** (2019). Taking decision making out of the vacuum: Using cognitive models to understand choice in complex environments. *Department of Psychology*, Mississippi State University.
- 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.*

Ph.D. Supervision

Yonatan Vanunu, co-supervising with B. R. Newell (2017-2021)

Teaching

University of Illinois

Decisions & Judgments (Undergraduate Level; Fall 2021)

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)

Mentoring and Research Supervision

University New South Wales

Ph.D. Students, Newell Lab (2017-2021)

Post-graduate honors students, Newell Lab (2017-2020)

Undergraduate research intern, Newell Lab (2017-2020)

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 (2011)

Brown University

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

Ad hoc Reviewing

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

Professional Affiliations

Society for Judgment and Decision Making
Cognitive Science Society
Society for Mathematical Psychology
Psychonomic Society

April, 2022