

Dr. Mikhail S. Spektor

Research fellow, Department of Psychology, University of Freiburg

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RESEARCH INTERESTS

- Decisions under risk and uncertainty
- Learning and decision making
- Context-dependent preferences
- Cognitive modeling

EDUCATION

Dr. phil.

Faculty of Psychology, University of Basel

📍 Basel, Switzerland

📅 Oct 2014–Apr 2018

- Ph.D. program “Social, Economic, and Decision Psychology”.
- Thesis: *Determinants of the context dependency of choices*
- Thesis supervisors: Jörg Rieskamp and Sebastian Gluth
- Thesis committee: Sebastian Gluth, David Kellen, and Jörg Rieskamp (Chair)
- Final grade: *Summa cum laude* (corresponds to a 6 on a 1–6 scale; 6 = best)

M.Sc. Psychology

Heidelberg University

📍 Heidelberg, Germany

📅 Aug 2012–Sep 2014

- Thesis: *The effect of credibility on donation behavior*
- Thesis supervisors: Andreas Voss and Israel Waichman
- Final grade: 1.0 (on a 1–6 scale; 1 = best)

B.Sc. Psychology

Heidelberg University

📍 Heidelberg, Germany

📅 Aug 2009–Jul 2012

- Thesis: *Measuring intelligence and its components using stochastic diffusion models*
- Thesis supervisors: Andreas Voss and Dirk Hagemann
- Final grade: 1.1 (on a 1–6 scale; 1 = best)

PROFESSIONAL POSITIONS

Assistant Professor

Department of Economics and Business, Universitat Pompeu Fabra

📍 Barcelona, Spain

📅 from Sep 2019

Visiting lecturer

Faculty of Psychology, University of Basel

📍 Basel, Switzerland

📅 Aug 2018–Jan 2019

Research fellow

Center for Social Psychology and Methodology, University of Freiburg

📍 Freiburg, Germany

📅 Jan 2018–Sep 2019

Research assistant

Center for Economic Psychology, University of Basel

📍 Basel, Switzerland

📅 Oct 2014–Dec 2017

Student research and teaching assistant

Center for Psychological Research Methods, Heidelberg University

📍 Heidelberg, Germany

📅 Apr 2011–Jul 2014

TEACHING

Data collection, evaluation, modeling

University of Freiburg

📍 Freiburg, Germany

📅 Apr 2019–Sep 2019

Seminar for graduate students (M.Sc. level; 4 CP).

Learning objectives: basic understanding and application of statistical and cognitive modeling.

Topics covered: probability theory, likelihood principle, parameter estimation, model comparison, evidence-accumulation models, signal detection theory, multinomial processing trees, Bayesian parameter estimation.

Cognitive modeling: Concepts and applications

University of Basel

📍 Basel, Switzerland

📅 Aug 2018–Jan 2019

Seminar for graduate students (M.Sc. and Ph.D. level; 2 CP).

Learning objectives: basic understanding and application of cognitive modeling.

Topics covered: probability theory, statistical vs. cognitive models, model development, parameter estimation, model comparison, decision-making models, reinforcement learning, Bayesian parameter estimation.

Experimental project seminar

University of Basel

📍 Basel, Switzerland

📅 Feb 2015–Jan 2017

Supervision of small, one-year long research projects in groups of four students (B.Sc. level; 8 CP)

Learning objectives: conducting literature research, developing hypotheses, collecting and analyzing data, writing research papers, and presenting the results as a scientific talk or poster.

Topics covered: emotions and decision making, learning and decision making, domain-specific risk taking, context-dependent preferences, social learning.

Tutorial descriptive and inference statistics

Heidelberg University

📍 Heidelberg, Germany

📅 Apr 2011–Sep 2014

Repetition of topics covered in lecture “Psychological research methods”, discussion and review of weekly assignments (B.Sc. level; no CP).

Topics covered: probability theory, t test, (multiple) correlation, (multiple) regression analysis, non-parametric tests, general linear model, ANOVA, factor analysis

SOFTWARE AND PROGRAMMING SKILLS

• Python	Proficient
• R	Proficient
• LaTeX	Proficient
• Stan	Proficient
• IBM SPSS	Proficient
• Matlab	Basic

ADMINISTRATION, SERVICE TO PROFESSION, AND OTHER

Conference organization

JDMx meeting for early-career researchers

📍 Basel, Switzerland

📅 08–11 Jun 2016

Invited symposia

Cognitive modeling in computer science and psychology: Bridging the gap

📍 Symposium conducted at the KogWis2018, Darmstadt, Germany

📅 05 Sep 2018

Ad-hoc reviewer

Journal of Experimental Psychology: Learning, Memory, and Cognition

Frontiers in Psychology

PeerJ

PLOS One

Other

Psychological counsel at legal tech start-up **LEX superior**

Data analyst of the interactive web documentary **51 Sprints**

GRANTS, AWARDS, AND FELLOWSHIPS

Conference travel grant of the *Swiss Academy of Humanities and Social Sciences*

🏷 CHF 500

📅 Aug 2017

Conference travel grant of the *Swiss Academy of Humanities and Social Sciences*

🏷 CHF 1,000

📅 Nov 2015

PUBLICATIONS AND TALKS

Peer-reviewed articles

- 2019 5 Fontanesi, L., Gluth, S., **Spektor, M. S.**, & Rieskamp, J. A reinforcement learning diffusion decision model for value-based decisions. *Psychonomic Bulletin & Review*. doi:10.3758/s13423-018-1554-2
- 4 **Spektor, M. S.**, Gluth, S., Fontanesi, L., & Rieskamp, J. How similarity between choice options affects decisions from experience: The accentuation of differences model. *Psychological Review*, 126, 52–88. doi:10.1037/rev0000122
- 2018 3 Gluth, S.* , **Spektor, M. S.***, & Rieskamp, J. Value-based attentional capture affects multi-alternative decision making. *eLife*, 7, 1–36. doi:10.7554/eLife.39659
- 2 **Spektor, M. S.**, Kellen, D., & Hotaling, J. M. When the good looks bad: An experimental exploration of the repulsion effect. *Psychological Science*, 29, 1309–1320. doi:10.1177/0956797618779041
- 1 **Spektor, M. S.**, & Kellen, D. The relative merit of empirical priors in non-identifiable and sloppy models: Applications to models of learning and decision making. *Psychonomic Bulletin & Review*, 25, 2047–2068. doi:10.3758/s13423-018-1446-5

Invited talks

- 2018 1 **Spektor, M. S.** (2018, December). *Violations of normative decision theory in experience-based decisions*. Research seminar at the Department of Economics and Business, Universitat Pompeu Fabra. Barcelona, Spain.

Conference talks

- 2018 7 **Spektor, M. S.***, Gluth, S.* & Rieskamp, J. (2018, September). Implementing value-based attentional capture in a computational process model of cognition. In R. Albrecht & M. S. Spektor (Chairs), *Cognitive Modeling in Computer Science and Psychology: Bridging the Gap*. Symposium conducted at the KogWis 2018. Darmstadt, Germany.
- 6 **Spektor, M. S.** & Wulff, D. U. (2018, March). Information search in decisions from experience. In H. Singmann & T. Pachur (Chairs), *Cognitive Models in Judgment and Decision Making*. Symposium conducted at the Tagung experimentell arbeitender Psychologen. Marburg, Germany.
- 2017 5 **Spektor, M. S.**, Kellen, D. & Hotaling, J. M. (2017, August). *When the good looks bad: First experimental evidence for the repulsion effect*. Subjective Probability, Utility, and Decision Making Conference. Haifa, Israel.
- 4 **Spektor, M. S.** & Kellen, D. (2017, July). *You can't make a silk purse of a sow's ear: On the relative merit of empirical priors in reinforcement learning models*. Annual Meeting of the Society for Mathematical Psychology. Coventry, U.K.
- 3 **Spektor, M. S.***, Gluth, S.* & Rieskamp, J. (2017, March). *Value-based attentional capture impairs trinary choice*. Tagung experimentell arbeitender Psychologen. Dresden, Germany.
- 2016 2 **Spektor, M. S.***, Kellen, D.* & Rieskamp, J. (2016, April). *Context dependency of loss aversion in choice*. The Nature of Preferences and their Relation to Choice. Potsdam, Germany.
- 1 **Spektor, M. S.**, Gluth, S., Fontanesi, L. & Rieskamp, J. (2016, March). Independence of irrelevant alternatives in decisions from experience: A challenge for reinforcement learning models. In D. Kellen, H. Singmann & T. Pachur (Chairs), *Cognitive Modeling in Memory and Decision Making*. Symposium conducted at the Tagung experimentell arbeitender Psychologen. Heidelberg, Germany.

*Equal contribution