

# DR. MIKHAIL S. SPEKTOR

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## RESEARCH INTERESTS

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

## EDUCATION

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### 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)

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### 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)

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### 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

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## Assistant professor

Department of Economics and Business, Universitat Pompeu Fabra

📅 Barcelona, Spain

📍 since Sep 2019

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## Visiting lecturer

Faculty of Psychology, University of Basel

📅 Basel, Switzerland

📍 Aug 2018–Jan 2019

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## Research fellow

Center for Social Psychology and Methodology, University of Freiburg

📅 Freiburg, Germany

📍 Jan 2018–Sep 2019

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## Research assistant

Center for Economic Psychology, University of Basel

📅 Basel, Switzerland

📍 Oct 2014–Dec 2017

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# TEACHING

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## Behavioral decision making I: Attention, experience, and influence

Universitat Pompeu Fabra

📅 Barcelona, Spain

📍 Jan 2020–Mar 2020

Seminar for graduate students (M.Sc. and M.Res. level; 6 ECTS; Taught 50/50 with Gaël Le Mens).

Learning objectives: basic understanding and application of behavioral decision-making theories and models.

Topics covered: information search in decisions under uncertainty, experience-based decisions in changing environments, multi-attribute multi-alternative context effects, decision making as a sequential-sampling process, attentional processes involved in decision making.

## Data collection, evaluation, modeling

University of Freiburg

📅 Freiburg, Germany

📍 Apr 2019–Aug 2019

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

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, decision-making models, reinforcement learning, Bayesian hypothesis testing and parameter estimation, basics of Stan.

## 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 ECTS).

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 ECTS)

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.

# SUPERVISION AND ADVISING

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## Master's thesis

Hannah Seidler

“Does information search affect the decision process?  
An investigation of the accentuation effect.”

Vanessa Kaiser

“Learning strategies in multi-stage decisions.”

## Bachelor's thesis

Ulrich Lösener

“Do purely spatial, non-visual relations exist?”

# SOFTWARE AND PROGRAMMING SKILLS

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• Python	Proficient
• R	Proficient
• $\text{\LaTeX}$	Proficient
• Stan	Proficient
• Matlab	Basic

# ADMINISTRATION, SERVICE TO PROFESSION, AND OTHER

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## Conference and workshop organization

### EADM Summer School: “Learning and decision making”

📍 Barcelona, Spain

📅 02–09 Jul 2020

### 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

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## Conference travel grant of the *Society for NeuroEconomics*

💰 USD 1,000

📅 Oct 2019

## 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

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## 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