

# Mikhail S. Spektor

Assistant professor, Department of Economics and Business, Universitat Pompeu Fabra

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## METRICS

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- 5 peer-reviewed publications
- 38 citations
- h-index: 4
- i10-index: 2

## 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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## Affiliated professor

Barcelona Graduate School of Economics

 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

Department of Psychology , University of Freiburg

 Freiburg, Germany

 Jan 2018–Sep 2019

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## Research assistant

Faculty of Psychology, University of Basel

 Basel, Switzerland

 Oct 2014–Dec 2017

# 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.

[Click here for the syllabus](#)

## Data collection, evaluation, and 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.

[Click here for more information on the course-description website](#)

## 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.

[Click here for more information on the course-description website](#)

## 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.

[Click here for more information on the course-description website](#)

## 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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• <b>Python</b>	Proficient
• <b>R</b>	Proficient
• <b>LaTeX</b>	Proficient
• <b>Stan</b>	Proficient
• <b>Matlab</b>	Basic

# ADMINISTRATION, SERVICE TO PROFESSION, AND OTHER

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## Conference and workshop organization

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

📍 Barcelona, Spain

📅 08–15 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

Computational Brain & Behavior

Frontiers in Psychology

PeerJ

PLOS One

## Other

Counsel at legal tech start-up **LEX superior GmbH**

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

# GRANTS, AWARDS, AND FELLOWSHIPS

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## Steven Karger Prize (award of the Faculty of Psychology, University of Basel)

📅 Nov 2019

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

📅 Oct 2019

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

📅 Aug 2017

## Conference participation award (*MathPsych/ICCM 2017*)

📅 Jul 2017

## Conference participation award (*International Meeting of the Psychonomic Society 2016*)

📅 May 2016

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

📅 Nov 2015

## Full scholarship for pre-doctoral studies (Friedrich Naumann Foundation for Freedom)

📅 Sep 2009–Sep 2014

# 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*, 26(4), 1099–1121. <https://doi.org/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(1), 52–88. <https://doi.org/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. <https://doi.org/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(8), 1309–1320. <https://doi.org/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(6), 2047–2068. <https://doi.org/10.3758/s13423-018-1446-5>

## Manuscripts in preparation or submitted for publication

- Submitted     4   **Spektor, M. S.**, & Seidler, H. Irrelevant outcomes lead to violations of economic rationality.
- 3   Voormann, A., **Spektor, M. S.**, & Klauer, K. C. The simultaneous recognition of multiple objects: A process analysis.
- In preparation     2   **Spektor, M. S.\***, Gluth, S.\*, & Rieskamp, J. Saliency distorts reward processing during reinforcement learning.
- 1   **Spektor, M. S.**, & Wulff, D. U. Information search in decisions from experience.

## Invited talks

- 2019     5   **Spektor, M. S.** (2019, June). *Determinants of the context dependency of choices*. Dissertation competition of the Cognitive Psychology Division of the German Society for Psychology, Willebadessen, Germany.
- 2018     4   **Spektor, M. S.** (2018, December). *Violations of normative decision theory in experience-based decisions*. Research seminar at the Department of Economics, Business, Universitat Pompeu Fabra, Barcelona, Spain.
- 3   **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.
- 2   **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.
- 2016     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.

## Conference talks

- 2019      6   **Spektor, M. S.\***, Gluth, S.\* & Rieskamp, J. (2019, October). *Violations of economic rationality in reinforcement learning are driven by a saliency-dependent reward-prediction-error signal in the ventral striatum*. Poster spotlight at the Annual Meeting of the Society for NeuroEconomics, Dublin, Ireland.
- 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, 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.**, Gluth, S., Fontanesi, L. & Rieskamp, J. (2016, August). *Independence of irrelevant alternatives in decisions from experience: A challenge for reinforcement learning models*. Poster spotlight at the Annual Meeting of the Society for NeuroEconomics, Berlin, Germany.
- 1   **Spektor, M. S.\***, Kellen, D.\* & Rieskamp, J. (2016, April). *Context dependency of loss aversion in choice*. The Nature of Preferences, their Relation to Choice. Potsdam, Germany.

\*Equal contribution