

CURRENT POSITION

Yale University New Haven, USA
Associate Professor in Economics 2019 – present

EDUCATION & PAST POSITIONS

UC Berkeley Berkeley, USA
Associate Professor in Economics 2018 – 2019

UC Berkeley Berkeley, USA
Assistant Professor in Economics 2014 – 2018

Microsoft Research New England Boston, USA
Postdoctoral Researcher 2013 - 2014

Bonn Graduate School of Economics (BGSE) Bonn, Germany
Ph.D. in Economics supervised by Professor Paul Heidhues 2008 – 2013

University of Bonn Bonn, Germany
Diplom in Mathematics 2004-2010

University of Bonn Bonn, Germany
Diplom in Economics 2004-2009

PUBLICATIONS

Matching in Dynamic Imbalanced Markets with Itai Ashlagi, Afshin Nikzad, *Accepted at the Review of Economic Studies*

Optimal Auctions for Dual Risk Averse Bidders: Myerson meets Yaari with Alex Gershkov, Benny Moldovanu, Mengxi Zhang, *Accepted at the Review of Economic Studies*

Progressive Participation with Dirk Bergemann, *Accepted at the Theoretical Economics*

Identifying Procrastination from the Timing of Choices with Paul Heidhues, *American Economic Review*, vol. 111, no. 8, August 2021

Extreme Points and Majorization: Economic Applications with Andy Kleiner, Benny Moldovanu, *Econometrica*, vol. 89, no. 4, July 2021

Limits Points of Endogenous Misspecified Learning with Drew Fudenberg, Giacomo Lanzani, *Econometrica*, vol. 89, no. 3, May 2021

Too Proud to Stop: Regret in Dynamic Decisions with Paul Viefers, *Journal of the European Economic Association*, vol. 19, no. 1, February 2021

Convergence in models of misspecified learning with Paul Heidhues, Botond Köszegi, *Theoretical Economics*, vol. 16, no. 1, January 2021

From Blackwell Dominance in Large Samples to Renyi Divergences and Back Again with Xiaosheng Mu, Luciano Pomatto, Omer Tamuz, *Econometrica*, vol. 89, no. 1, January 2021

Testing the Drift-Diffusion Model with Drew Fudenberg, Whitney Newey, Philipp Strack, Tomasz Strzalecki, *Proceedings of National Academy of Science*, vol. 117, no. 52, December 2020

Bitcoin: An Impossibility Theorem for Proof-of-Work based Protocols with Jacob Leshno, *American Economic Review : Insights*, vol. 2, no. 3, September 2020

A Theory of Auctions with Endogenous Valuations with Alex Gershkov, Benny Moldovanu, Mengxi Zhang, *Journal of Political Economy*, vol. 129, no. 4, August 2020

Rational Groupthink with Matan Harel, Elchanan Mossel, Omer Tamuz, *Quarterly Journal of Economics*, vol. 136, no. 1, July 2020

Turning Up the Heat: The Demoralizing Effect of Competition in Contests with Dawei Fang, Thomas Noe, *Journal of Political Economy*, vol. 128, no 5., May 2020

Stochastic Dominance under Independent Noise with Luciano Pomatto, Omer Tamuz, *Journal of Political Economy*, vol. 128, no 5., May 2020

An Inverse Optimal Stopping Problem for Diffusions with Thomas Kruse, *Mathematics of Operations Research*, vol. 44, no. 2, May 2019

Speed, Accuracy, and the Optimal Timing of Choices with Drew Fudenberg, Tomasz Strzalecki, *American Economic Review*, vol. 108, no. 12, December 2018

Unrealistic Expectations and Misguided Learning with Paul Heidhues, Botond Köszegi, *Econometrica*, vol. 86, no. 4, July 2018

Revenue Maximizing Mechanisms with Strategic Customers and Unknown, Markovian Demand with Alex Gershkov, Benny Moldovanu, *Management Science*, vol. 64, no. 5, May 2018

Active Learning with a Misspecified Prior Drew Fudenberg, Gleb Romanyuk, *Theoretical Economics*, vol 12., no. 3, September 2017

Expectation-Based Loss Aversion and Strategic Interaction with Simon Dato, Andreas Grunewald, Daniel Mueller, *Games and Economic Behavior*, vol. 104, July 2017

Continuous Time Contests with Private Information with Christian Seel, *Mathematics of Operations Research*, vol 41, no. 3, August 2016

Strategic Experimentation with Private Payoffs with Paul Heidhues, Sven Rady, *Journal of Economic Theory*, vol. 159, part A, September 2015

Dynamic Revenue Maximization: A Continuous Time Approach with Dirk Bergemann, *Journal of Economic Theory*, vol. 159, part B, September 2015

Optimal Stopping With Private Information with Thomas Kruse, *Journal of Economic Theory*, vol. 159, part B, September 2015

Randomization beats Second Price as a Prior-Independent Auction Hu Fu, Nicole Immorlica, Brendan Lucier, *Economics and Computation*, June 2015

Finite, integrable and bounded time embeddings for diffusions with Stefan Ankirchner, David Hobson, *Bernoulli*, vol. 21, no. 2, May 2015

Until the Bitter End: On Prospect Theory in the Dynamic Context with Sebastian Ebert, *American Economic Review*, vol. 105, no. 4, April 2015

Deadlines in Stochastic Contests with Christian Seel, Matthias Lang, *Journal of Mathematical Economics*, vol. 52, May 2014

Gambling in Contests with Christian Seel, *Journal of Economic Theory*, vol. 148, no 5., September 2013

Skorokhod Embeddings in Bounded Time with Stefan Ankirchner, *Stochastics And Dynamics*, vol. 11, no. 2n3, September 2011

WORKING PAPERS

All working papers are available at <https://philippstrack.com>.

Monotone Additive Statistics with Xiaosheng Mu, Luciano Pomatto, Omer Tamuz, *Revise and Resubmit in Econometrica*

The Cost of Information with Luciano Omer Tamuz, *Revise and Resubmit at the American Economics Review*

Limited Self-knowledge and Survey Response Behavior Armin Falk, Thomas Neuber

Dynamic Preference “Reversals” and Time Inconsistency with Dmitry Taubinsky

Pathwise Concentration Bounds for Bayesian Beliefs with Drew Fudenberg, Giacomo Lanzani

Background Risk and Small-Stakes Risk Aversion with Xiaosheng Mu, Luciano Pomatto, Omer Tamuz

Optimal Control of an Epidemic through Social Distancing with Thomas Kruse

Optimal Disclosure of Information to a Privately Informed Receiver with Ozan Candogan

Overconfidence and Prejudice with Paul Heidhues, Botond Köszegi

The Wald Problem and the Equivalence of Sequential Sampling and Static Information Costs with Stephen Morris

Never, Ever Getting Started: On Prospect Theory without Commitment with Sebastian Ebert

Efficient Dynamic Allocation with Strategic Arrivals with Alex Gershkov, Benny Moldovanu

Risk-Taking in Contests - The impact of fund-manager Compensation on Investor Welfare

PRESENTATIONS

2021: Toulouse, Zurich, Harvard, Princeton, Chicago/Berkeley Behavioral Seminar

2020: Toronto, Yale, Cambridge, University of Pennsylvania, Penn State, Rochester, University of Chicago, Penn State, Rochester, University of Chicago, University of Hong Kong,

2019: Stanford, University of Southern California, Santa-Clara University, Barcelona, Oxford, Warwick, Queen Mary University, Boston College, Paris School of Economics, HEC Paris

2018: Caltech, NYU, CIDE, London School of Economics, Indiana University, ITAM, Boston University, University of Illinois Urbana-Champaign, University of Wisconsin-Madison, Cornell, University of Hamburg

2017: UC San Diego, Arizona State University, Harvard/MIT, Berkeley, Rice, Bonn, Munich, Regensburg, Humboldt University Berlin, Yale, Gothenburg, Bergen

2016: Princeton, Columbia, Duke, Oxford, Warwick, University College London, University of Surrey, Northwestern University, Washington University St Louis

2015: University of Chicago, USC, Stanford, Penn State, Pittsburgh, University of Pennsylvania, Bonn, Jena, Stanford, Michigan, Santa-Clara University

2014: UC Davis, Berkeley, Harvard/MIT, MIT Sloan

2013: Yale, Montreal, MPI Bonn, University of Pennsylvania, Duke, Toronto, Austin, Microsoft Research, Warwick, Bielefeld, Columbia, NYU, Caltech, Northwestern University, Harvard, UCL

TEACHING

Econ 351: Mathematical Gametheory	Yale 2021 (spring)
Econ 351: Mathematical Gametheory	Yale 2020 (spring)
Econ C103: Introduction to Mathematical Economics, Mechanism Design	Berkeley 2019 (spring)
Econ 206: Mechanism Design & Agency Theory (2nd year PhD)	Berkeley 2019 (spring)
Econ 206: Mechanism Design & Agency Theory (2nd year PhD)	Berkeley 2018 (spring)
Econ 459: Institutions with non-rational agents	Yale 2017 (fall)
Econ C103: Introduction to Mathematical Economics, Mechanism Design	Berkeley 2017 (spring)
Econ 206: Mechanism Design & Agency Theory (2nd year PhD)	Berkeley 2017 (spring)
Econ C103: Introduction to Mathematical Economics, Mechanism Design	Berkeley 2016 (spring)
Econ 206: Mechanism Design & Agency Theory (2nd year PhD)	Berkeley 2016 (spring)
Behavioral Taxation and Mechanism Design Reading Group	Berkeley 2016
Econ 206: Mechanism Design & Agency Theory (2nd year PhD)	Berkeley 2015 (spring)
Econ 521b: Advanced Microeconomic Theory: Dynamic Mechanism Design <i>Taught together with Juuso Välimäki</i>	Yale 2014 (spring)

GRANTS

Sloan Fellowship in Economics	2019 – 2021
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PAST PHD STUDENTS ON WHOSE COMMITTEE I SERVED

Andrew Joseph Schwartz (2018, University of Georgia), Afshin Nikzad (2018, University of Southern California), Eddie Ning (2019 Cheung Kong Graduate School of Business), Dong Wei (2019, University of California Santa Cruz), Yujie Qian (2020, Prysm Group)

RESEARCH STATEMENT

I am a microeconomic theorist interested in how people behave and interact in dynamic situations. My research explores questions of institution design, learning, non-rational behavior and contests (outlined below). One topic with which I want to particularly engage in the future is the understanding of social biases and prejudice.

Learning and the Timing of Decisions: Consider a customer who chooses between two products. Is she more likely to pick the product which maximizes her utility when she chooses quickly? Fudenberg, Strack & Strzalecki (2016) study the correlation between the timing of decisions and their likelihood of being correct. We find that in a sequential sampling model (Wald, 1947), where the difference between the utilities of the choices is ex-ante unknown, quick choices are on average more likely to be correct. This provides an explanation for the common empirical finding that quick decisions tend to be better in experiments (cf. Swensson, 1972; Luce, 1986; Ratcliff & McKoon, 2008).

Learning under Misspecification: How do economic agents with misspecified beliefs learn? Consider, for example, an agent who is overconfident about her own ability and observes the output of her team. As she overestimates her own productivity, she will be disappointed by the team's output and thus tend to think that her team mates are of lower ability than they truly are. Heidhues, Koszegi & Strack (2016) show that this miss-inference caused by the agent's overconfidence is self-reinforcing and drives her beliefs systematically away from the truth. The ability to learn consequently harms overconfident agents as learning leads them to worse decisions. Heidhues, Koszegi & Strack (2021) shows how overconfidence can cause prejudice and discrimination in society. In Fudenberg, Romanyuk & Strack (2016), we characterize long-run beliefs and actions for general misspecified beliefs under a Binomial prior. In Fudenberg, Lanzani & Strack (2020) we generalize the analysis to arbitrary prior beliefs.

Social Learning: Economic agents often do not only learn from their own experience. A customer could learn about the quality of a product by observing other customers' choices. In Harel, Mossel, Strack & Tamuz (2016), we explore how rational agents learn from the actions of others who face similar decision problems. We show that only a small fraction of the original private information can be learned from actions. This result implies that decentralized information aggregation with rational agents will fail in many contexts and provides a justification for institutions that aggregate information. Heidhues, Rady & Strack (2015) show that communication through cheap talk messages can sometimes incentivize efficient information acquisition and transmission.

Mechanism Design: Many contracts - like phone contracts, gym memberships, repeated procurement auctions - govern long-term relationships. The recent literature in dynamic mechanism design studies how to structure such long-term contracts in order to maximize a given objective like social welfare or revenue. In Kruse & Strack (2015, 2016a), we derive optimal contracts for irreversible investment and general optimal stopping problems. In Bergemann & Strack (2015, 2016), we explore optimal contracts for repeated sales and procurement situations. Gershkov, Moldovanu & Strack (2016) derive a revenue maximizing sales mechanism when buyers arrive stochastically and time their purchase strategically. In Strack & Kruse (2016b), we want to analyze under what circumstances local incentive compatibility conditions imply global incentive compatibility in dynamic mechanism design problems. Fu, Immorlica, Lucier & Strack (2015) consider the optimal design of a static auction when the designer does not know the distributions of the bidders' valuations and takes a worst case approach.

Dynamic Behavioral Models: While expected utility (EU) is well understood in a static as well as in a dynamic context, a lot of research on non-EU preferences has focused on static contexts. Ebert & Strack (2015) consider an extension of prospect theory (PT) to the dynamic context. We find that a naive PT decision maker without commitment will never stop gambling, which predicts that she will always go bankrupt in a casino and never sell a stock even if it is profitable to do so immediately. In contrast, Ebert & Strack (2016) show that a sophisticated PT decision maker without commitment will never start gambling, i.e. will behave like an infinitely risk-averse EU agent. Vieffers & Strack (2016a,b) explore anticipated regret (Loomes & Sugden, 1982) in a dynamic model both analytically and experimentally. We find that subjects are reluctant to accept an offer below the best past offer and show that this is consistent with the minimization of anticipated regret.

Contests: Many economic situations take the form of a contest. For example work might compete for job or firms for a contract. In Noe, Fang & Strack (2020) we show that rational agents will often work *less* hard if they face more competition. As fund managers' compensation mainly depends on their relative performance, they should behave as if they were competing in a contest. Strack (2016) studies the competition between fund managers in a dynamic financial market model à la Black Scholes. The paper proves that in equilibrium, fund managers use inefficiently risky investment strategies. The more competitive the managed fund market becomes, the larger the resulting welfare loss. As in 2013, 46.3% of US households held investments into managed funds valued at 17.1 trillion US dollars, this excessive risk-taking is potentially of first-order importance for social welfare. Seel & Strack (2013, 2015) develop a novel continuous time contest model where contestants learn about their own performance over time, but not about their competitors' performance, and can dynamically decide when to stop exerting effort. Lang, Seel & Strack (2014) study the role of deadlines in such a dynamic contest model.