

Martin Šmíd

Institute of Information Theory and Automation of the CAS, Pod Vodárenskou věží 4,
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Education

- 2004 – Ph.D. from Charles University, Prague
 - in Econometrics and Operations Research
 - dissertation: On Approximation of Stochastic Programming Problems
- 1997 – M.Sc. from Charles University, Prague
 - in Econometrics

Research interests

decision-making under uncertainty
stochastic models
multistage stochastic optimization
epidemic modelling

Employment History

- 2002 – now: Institute of Information Theory and Automation of the Czech Academy of Sciences
 - o research fellow
 - o department of Econometrics
- 2006 – now: Charles University, Prague
 - o teaching assistant at the Faculty of Social Sciences (2006- 8)
 - o researcher at the Faculty of Mathematics and Physics (2022-now)
 - o PhD thesis supervisor (two graduates so far)
- 2001 – 2005: University of Economics, Prague, Jindřichův Hradec
 - o teaching assistant (Optimization methods, Mathematical economics)
 - o teacher (Statistics)
- 1992 – 1998: Notia, Inc, Prague
 - o programmer-analyst

Recent Research

COVID-19 pandemics (Šmíd 2022)
microstructure models of limit order markets (Šmíd 2016, Šmíd 2012)
multistage decision models of emission trading (Šmíd 2009, Zapletal et al. 20120)

Skills

econometrics
mathematical modelling
probability theory
C++ programming

Funding

2006 – 2008: Mathematical modelling of the microstructure of financial markets with the non-synchronous trading

- o principal researcher
- o assessed as excellent by Czech Science Foundation

2010 – 2012: Rational decision making at markets with asynchronous trading: theory and empirical evidence

- o principal researcher
- o assessed as excellent by Czech Science Foundation

2013 – 2015: Research team for the modelling of economic and financial processes at VSB-TU Ostrava (funded by EU)

- o head of the project partner's team

2015 – 2017: Dynamic modelling of mortgage portfolio risk

- o principal researcher

2016 – 2018: Dynamic decision-making of a steel producer under emission control

- o principal researcher

2019 – 2021: Arbitrage on limit order markets with boundedly rational agents

- o principal researcher

2020 – 2021: City for People, not for Virus

- o joint project of four institutions, 15 members team
- o principal researcher

ten other projects

- o member of a research team

Membership

2008 – 2012: The Grant Agency of the AS CR, Prague

- o vice-chair of the Council for Humanities and Social Sciences

2012 – now: Faculty of Mathematics and Physics, Charles University

- o member of the Doctoral Council of Financial and Insurance Mathematics Programme

2015 – now: Kybernetika

- o associated editor

2017 – 2021: Czech Science Foundation

- o member of the Panel for Economic Sciences, Macroeconomics, Microeconomics, Econometrics, Quantitative Methods in Economics

2020 – now: Model antiCOVID-19 for Czech Republic

- o member of the initiative

2022 – now: National Institute for Pandemic Management (advisory body of Ministry of Health)

- o member of the Analytical Group

Selected Publications

ŠMÍD Martin et al. Protection by Vaccines and Previous Infection Against the Omicron Variant of Severe Acute Respiratory Syndrome Coronavirus 2 , *Journal of Infectious Diseases* 2022

ZAPLETAL František, ŠMÍD Martin, and KOPA Miloš. Multistage emissions management of a steel company. *Annals of Operations Research* 2020; 292(2)

ŠMÍD Martin. Estimation of zero-intelligence models by L1 data, *Quantitative Finance* 2016; 16(9)

ŠMÍD Martin. Probabilistic properties of the continuous double auction. *Kybernetika*, 2012; 48(1)

ŠMÍD Martin. The expected loss in the discretization of multistage stochastic programming problems - estimation and convergence rate. *Annals of Operations Research* 2009; 165(1)