Martin Šmíd

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Education

- 2004 - PhD from Charles University, Prague
    - in Econometrics and Operations Research
    - dissertation: On Approximation of Stochastic Programming Problems

- 1997 - MSc from Charles University, Prague
    - in Econometrics

Research interests

- decision-making under uncertainty
- stochastic models of limit order markets
- factor models of credit risk
- multistage stochastic optimization

Employment History

- 2002 – now: Institute of Information Theory and Automation of the Czech Academy of Sciences
    - research fellow
    - department of Econometrics

- 2006 – now: Charles University, Prague
    - teaching assistant at the Faculty of Social Sciences (2006- 8)
    - external lecturer at the Faculty of Mathematics and Physics (2015-now)
    - PhD thesis supervisor (two graduates so far)

- 2001 – 2005: University of Economics, Prague, Jindřichův Hradec
    - teaching assistant (Optimization methods, Mathematical economics)
    - teacher (Statistics)

- 1992 – 1998: Notia, Inc, Prague
    - programmer-analyst

Recent Research

- microstructure models of limit order markets (Šmíd and Kopa 2017, Šmíd 2016, Šmíd 2012)
- multistage decision models of emission trading (Zapletal and Šmíd 2016, Šmíd at al. 2017)
- dynamic credit risk models (Gapko and Šmíd 2012, 2016)

Skills

- probability theory
- mathematical modelling in finance
- C++ programming

Funding

- 2006 – 2008: Mathematical modelling of the microstructure of financial markets with the non-synchronous trading
  - principal researcher
  - assessed as excellent by Czech Science Foundation
- 2010 – 2012: Rational decision making at markets with asynchronous trading: theory and empirical evidence
  - principal researcher
  - 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)
  - head of the project partner's team
- 2015 – 2017: Dynamic modelling of mortgage portfolio risk
  - principal researcher
- 2016 – 2018: Dynamic decision-making of a steel producer under emission control
  - principal researcher
- eight other projects
  - member of a research team

Membership

- 2008 – 2012: The Grant Agency of the AS CR, Prague
  - vice-chair of the Council for Humanities and Social Sciences
- 2012 – now: Faculty of Mathematics and Physics, Charles University
  - member of the Doctoral Council of Financial and Insurance Mathematics Programme
- 2015 – now: Kybernetika
  - associated editor
- 2017 – now: Czech Science Foundation
  - member of the Panel for Economic Sciences, Macroeconomics, Microeconomics, Econometrics, Quantitative Methods in Economics

Selected Publications

ŠMÍD Martin, and KOPA Miloš. Dynamic Model of Market with Uninformed Market Maker. *Kybernetika* 2017; 53(5)

ZAPLETAL Framtišek, ŠMÍD Martin, and HANČLOVÁ Jana. Which carbon derivatives are applicable in practice? A case study of a European steel compan. *Kybernetika* 2017; 53(6)

GAPKO Petr, and ŠMÍD Martin. Multi-Period Structural Model of Mortgage Portfolio with Cointegrated Factors. *Czech Journal of Economics and Finance* 2016*;* 66(6)

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

ZAPLETAL Framtišek, and ŠMÍD Martin. Mean-risk optimal decision of a steel company under emission control. *Central European Journal of Operations Research* 2016; 24(2)

GAPKO Petr, and ŠMÍD Martin. Dynamic Multi-Factor Credit Risk Model with Fat-Tailed Factors , Finance a úvěr-Czech Journal of Economics and Finance, 2012; 62(2)

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)

KAŇKOVÁ Vlasta, and ŠMÍD Martin. On approximation in multistage stochastic programs: Markov dependence. *Kybernetika* 2004; 40(5)