

Curriculum Vitae

Name: **Michal Kaut**
Born: March 25, 1976; Hradec Králové, Czech Republic
Nationality: Czech Republic
Title: Dr. ing. (PhD equiv.)
Position: Researcher, SINTEF Technology and Society, Trondheim, Norway

Education

Dr. ing. (PhD equiv.) in stochastic programming, 1999–2003
Department of Mathematical Sciences
Norwegian University of Science and Technology, Trondheim, Norway
Thesis title: Scenario tree generation in stochastic programming:
Cases from finance
Thesis supervisors: Stein W. Wallace, Kjetil Høyland, Harald Krogstad

Ing. (MSc equiv.) in mathematical modelling, 1994–1999
Faculty of Nuclear Science and Physical Engineering
Czech Technical University, Prague, Czech Republic
Thesis title: Testing of an efficiency of capital markets (in Czech)
Thesis supervisor: Miloslav Vošvrda

Full-time positions

2009– Researcher, SINTEF Technology and Society, Trondheim, Norway
2009–2011 Post-doc, IØT NTNU, Trondheim, Norway
2006–2009 Post-doc, Molde University College, Molde, Norway
2004–2005 Lecturer, The School of Mathematics at the University of Edinburgh
2003 Model developer, Gjensidige NOR Asset Management, Oslo, Norway
1999–2003 Stipendiat (PhD fellow), IØT NTNU, Trondheim, Norway

Part-time positions

2008–09 Scientific adviser, Ragnar Frisch Centre for Economic Research, Oslo

Teaching

2008–09 Decision making under uncertainty at Molde University College (BSc)
2007–10 Bayesian statistics at the University of Edinburgh (MSc)
2005 Simulation at the University of Edinburgh (4th year and MSc)
2004–05 Probability and statistics at the University of Edinburgh (2nd year and MSc)
1998–99 Probability and statistics at Charles University in Prague (teaching assistant)
1997–99 Mathematical analysis at CTU Prague (teaching assistant)

Student supervision

- Biju Kumar Thapalia: PhD, Molde University College. *Stochastic Single-Commodity Network Design*, May 2010 – co-supervisor since 2008.
- Hajnalka Vaagen: PhD, Molde University College. *Assortment planning under uncertainty*, August 2009 – co-supervisor since 2007.
- several MSc projects at the University of Edinburgh.

Published and accepted papers

- *Stochastic energy market equilibrium modeling with multiple agents* (with Kjell Arne Brekke, Rolf Golombek, Sverre A.C. Kittelsen and Stein W. Wallace). In *Energy*, 134, pp. 984–990, 2017.
- *The impact of design uncertainty in engineer-to-order project planning* (with Hajnalka Vaagen and Stein W. Wallace). In *European Journal of Operational Research (EJOR)*, 261(3), pp. 1098–1109, 2017.
- *Energy-Efficient Building Retrofits: An Assessment of Regulatory Proposals under Uncertainty* (with Paula Rocha and Afzal S. Siddiqui). In *Energy*, 101, pp. 278–287, 2016.
- *BLOMST – An Optimization Model for the Bioenergy Supply Chain* (with Ruud Egging, Truls Flatberg, and Kristin Tolstad Uggen). In *Hanbook of Bioenergy*, S. D. Eksioglu, S. Rebennack, and P. Pardalos (eds.), Springer, pp. 37–66, 2015.
- *A Mockup Stochastic Program to Study the Impact of Design Uncertainty on ETO Shipbuilding Planning* (with Hajnalka Vaagen). In *Advances in Production Management Systems: Innovative Production Management Towards Sustainable Growth*, 460, proceedings of IFIP WG 5.7 International Conference, APMS 2015, Tokyo, Japan, pp. 167–174, 2015..
- *Assessing Production Assurance in a Natural Gas Network by Using Scenario Generation and Optimization* (with Kjetil Midthun, Lars Hellemo, and Adrian Werner). In *Energy Procedia*, 64, proceedings of the 3rd Trondheim Gas Technology Conference, pp. 120–129, 2015.
- *Scenario generation with distribution functions and correlations* (with Arnt-Gunnar Lium). In *Kybernetika*, 50 (6), pp. 1049–1064, 2014.
- *A copula-based heuristic for scenario generation*. In *Computational Management Science*, 11 (4), pp. 503–516, 2014.
- *Multi-horizon stochastic programming* (with Kjetil T. Midthun, Adrian S. Werner, Asgeir Tommasgard, Lars Hellemo, and Marte Fodstad). In *Computational Management Science*, 11 (1–2), pp. 179–193, 2014.
- *Modellering av usikkerhet i numeriske likevektsmodeller med stokastisk scenariometode* (with Kjell Arne Brekke, Rolf Golombek, Sverre A.C. Kittelsen and Stein W. Wallace). In *Samfunnsøkonomen*, 22, pp. 16–26, 2013.
- *Stochastic MIP Modeling of a Natural Gas-Powered Industrial Park* (with Gerardo Pérez-Valdés, Vibeke Nørstebø and Kjetil Midthun). In *Energy Procedia*, proceedings of the 2nd Trondheim Gas Technology, 26, pp. 74–81, 2012.
- *Scenario-Tree Generation* (with Alan J. King and Stein W. Wallace); Chapter 4 of *Modeling with Stochastic Programming*, Springer, 2012.
- *Single-commodity network design with random edge capacities* (with Biju K. Thapalia, Teodor Gabriel Crainic and Stein W. Wallace). In *European Journal of Operational Research (EJOR)*, 220 (2), pp. 394–403, 2012.
- *Single-Commodity Stochastic Network Design with Multiple Sources and Sinks* (with Biju K. Thapalia, Teodor Gabriel Crainic and Stein W. Wallace). In *INFOR*, 49 (3), pp. 193–211, 2012.
- *Single source single-commodity stochastic network design* (with Biju K. Thapalia, Teodor Gabriel Crainic and Stein W. Wallace). In *Computational Management Science*, special issue on ‘Optimal Decision Making under Uncertainty’, 9 (1), pp. 139–160, 2012.
- *Modelling consumer directed substitution* (with Hajnalka Vaagen and Stein W. Wallace). In *International Journal of Production Economics*, special issue on ‘Robust Supply Chain Management’, 134 (2), pp. 388–397, 2011.

- *The value of numerical models in quick response assortment planning* (with Hajnalka Vaagen and Stein W. Wallace). In *Production Planning & Control*, 22 (3), pp. 221–236, 2011.
- *Using inventory to handle risks in the supply of oil to Nepal* (with Biju K. Thapalia and Stein W. Wallace). In *International Journal of Business Performance and Supply Chain Modelling*, 1 (1), pp. 41–60, 2009.
- *Shape-based Scenario Generation using Copulas* (with Stein W. Wallace). In *Computational Management Science*, 8 (1–2), pp. 181–199, 2011.
- *COIN-OR Tools for Stochastic Programming*. In Miloš Kopa, editor, *On Selected Software for Stochastic Programming*, MatfyzPress, Prague, 2008.
- *Stochastic Optimization Models for a Single-Sink Transportation Problem* (with F. Maggioni and L. Bertazzi). In *Computational Management Science*, special issue on ‘Computational Optimization under Uncertainty’, 6 (2), pp. 251–267, 2009.
- *Stability analysis of a portfolio management model based on the conditional value-at-risk measure* (with Stein W. Wallace, Hercules Vladimirov and Stavros Zenios). In *Quantitative Finance*, 7 (4), pp. 397–409, 2007.
- *Evaluation of scenario-generation methods for stochastic programming* (with Stein W. Wallace). In *Pacific Journal of Optimization*, 3 (2), pp. 257–271, 2007.
- *A Heuristic for Moment-matching Scenario Generation* (with Kjetil Høyland and Stein W. Wallace). In *Computational Optimization and Applications*, 24 (2–3), pp. 169–185, 2003.