List of Publications: Prof. Dr. Thomas M. Surowiec

PUBLICATIONS

1. *A PDE-Constrained Optimization Approach for Topology Optimization of Strained Photonic Devices*, to appear in Opt. Eng. (w./ L. Adam, M. Hintermüller)

2. *A Semismooth Newton Method with Analytical Path-Following for the H^1-Projection onto the Gibbs Simplex* to appear in IMA J. Numer. Anal. (w/ L. Adam, M. Hintermüller)

3. *Numerical Optimization Methods for the Optimal Control of Elliptic Variational Inequalities* to appear in IMA Volume *Frontiers in PDE Constrained Optimization.*

4. *Existence and Optimality Conditions for Risk-Averse PDE-Constrained Optimization*, SIAM/ASA J. Uncertainty Quantification 6 (2), (2018) 787-815. (w/ D.P. Kouri)

5. *Finite Horizon Model Predictive Control of Electrowetting on Dielectric with Pinning*, Interfaces and Free Boundaries 19 (1), (2017) 1-30. (w/ H. Antil, M. Hintermüller, R.H. Nochetto, and D. Wegner)

6. *On the Directional Differentiability of the Solution Mapping for a Class of Variational Inequalities of the Second Kind*, Set-Valued Var. Anal DOI 10.1007/s11228-017-0408-9. (w/ M. Hintermüller)

7. *A Bundle-Free Implicit Programming Approach for a Cass of Elliptic MPECs in Function Space*, Math. Program. 160 (1-2), (2016), 271-305 (w/ M. Hintermüller)

8. *Risk-Averse PDE-Constrained Optimization Using the Conditional Value-At-Risk*, SIAM J. Optim., 26(1), (2016), 365-396. (w/ D.P. Kouri)

9. *Generalized Nash Equilibrium Problems in Banach Spaces: Theory, Nikaido–Isoda-Based Path-Following Methods, and Applications*, SIAM J. Optim., 25(3), (2015), 1826-1856. (w/ M. Hintermüller and A. Kämmler)

10. *Several Approaches for the Derivation of Stationarity Conditions for Elliptic MPECs with Upper-Level Control Constraints*, Math. Prog. Ser. A., 146(1-2) (2014), 555-582. (w/ M. Hintermüller and B.S. Mordukhovich)

11. *A PDE-constrained Generalized Nash Equilibrium Problem with Pointwise Control and State Constraints*, Pac. J. Opt., 9(2), (2013) 251-273. (w/ M. Hintermüller)

12. *On Regular Coderivatives in Parametric Equilibria with Non-Unique Multipliers*, Math. Prog. Ser. B., 136(1) (2012), 111-131. (w/ R. Henrion and J.V. Outrata)

13. *Analysis of M-stationary points to an EPEC modeling Oligopolistic Competition in an Electricity Spot Market*, ESAIM: COCV 18 (2012) 295-317. (w/ R. Henrion and J.V. Outrata)

14. *First Order Optimality Conditions for Elliptic Mathematical Programs with Equilibrium Constraints via Variational Analysis*, SIAM J. Optim., 21(4), (2011) 1561-1593. (w/ M. Hintermüller)

15. *On Calmness Conditions in Convex Bilevel Programming*, Applicable Analysis, 90 (2011) 951-970. (w/ R. Henrion)

16. *A Note on the Relation between Strong and M-stationarity for a Class of Mathematical Programs with Equilibrium Constraints*, Kybernetika, 46 (2010) 423-434. (w/ R. Henrion and J.V. Outrata)

17. *On the Co-Derivative of Normal Cone Mappings to Inequality Systems*, to appear in: Nonlinear Analysis: Theory, Methods & Applications (2008). (w/ R. Henrion and J.V. Outrata)

18. *Subdivision of Edges and Matching Size*, Ars Combinatoria, 84 (2007) 141 - 153. (w/ D. Bauer and E. Schmeichel)

19. *Tutte sets in graphs II: The complexity of finding Maximum Tutte sets*, Discrete Applied Math., 155 (2007) 1336 - 1343. (w/ D. Bauer, H. J. Broersma, N. Kahl, A. Morgana, and E. Schmeichel

PREPRINTS

1. *Deflation for Semismooth Equations*, submitted to OMS. (w/ P.E. Farrell, M. Croci)

2. *Epi-Regularization of Risk Measures for PDE-Constrained Optimization*, submitted to Math. Oper. Res. (w/ D.P. Kouri)

3. *Optimization of a Multiphysics Problem in Semiconductor Laser Design*, submitted to SIAM J. Appl. Math. (w/ L. Adam, M. Hintermüller, D. Peschka)

4. *Risk-Averse Optimal Control of Semilinear Elliptic PDEs*, Submitted to COCV. (w/ D.P. Kouri)

5. *An Interior-Point Approach for Risk-Averse PDE-Constrained Optimization Problems with Coherent Risk Measures*, in preparation (w/ S. Garreis, M. Ulbrich)

OTHER

1. *PDE-Constrained Optimization under Uncertainty* SIAG/OPT Views and News, Volume 25 Number 2, December 2017 (w/ D.P. Kouri)

2. *Additional coagulation of the resection surface after experimental non-anatomical laser resection of the lung* To appear in Journal of Thoracic Disease (w/ A. Kirschbaum, A. Pehl, A. Gockel, D.K. Bartsch, N. Mirow)

3. *Nonanatomical pulmonary parenchymal resection with the Nd: YAG Laser LIMAX 120: how important is resection depth* submitted (w/. A. Kirschbaum, A. Pehl, A. Gockel, D.K. Bartsch, und N. Mirow)