



**Current positions**

Director of the Institute of Energy & Climate Research IEK-10: Energy Systems Engineering, FZJ (since 2017)

Full Professor (W3) and Director of the Institute of Process Systems Engineering, RWTH Aachen University, Germany (since 2012)

**Previous positions (two selected)**

Rockwell International Assistant Professor, Mechanical Engineering at MIT, Cambridge MA, US (2009-2012)

Junior Research Group Leader, Aachen Institute of Computational Engineering Science, RWTH Aachen University, Germany (2008)

**Scientific degrees**

Ph.D. in Chemical Engineering, MIT, Cambridge MA, US (2006)

Diploma in Chemical Engineering, University Karlsruhe, Germany (1999)

**Recent research topics**

Design and operation of chemical and energy systems, deterministic global optimization, opt. under uncertainty, model predictive control, biomass & alternative fuels, water & energy, green power systems

**Awards, honors, memberships**

Editorial board, Science Advances (2019)

AIChE, CAST Division, Outstanding Young Researcher Award (2016)

Rockwell International Career Development Professor (2010)

**Publications (5 most important)**

- A. M. Schweidtmann, **A. Mitsos**, Deterministic global optimization with artificial neural networks embedded, *J. Optimiz. Theory App.* 180, 925 (2019) [doi:10.1007/s10957-018-1396-0](https://doi.org/10.1007/s10957-018-1396-0)
- P. Schäfer, H.G. Westerholt, A.M. Schweidtmann, S. Ilieva, **A. Mitsos**, Model-based bidding strategies on the primary balancing market for energy-intensive processes, *Comput. Chem. Eng.* 120, 4 (2019) [doi:10.1016/j.compchemeng.2018.09.026](https://doi.org/10.1016/j.compchemeng.2018.09.026)
- **A. Mitsos**, N. Asprion, C. A. Floudas, et al., Challenges in process optimization for new feedstocks and energy sources, *Comput. Chem. Eng.* 113, 209 (2018) [doi:10.1016/j.compchemeng.2018.03.013](https://doi.org/10.1016/j.compchemeng.2018.03.013)
- S. Deutz, et int., W. Leitner, **A. Mitsos**, S. Pischinger, A. Bardow, Cleaner production of cleaner fuels: wind-to-wheel–environmental assessment of CO<sub>2</sub>-based oxymethylene ether as a drop-in fuel, *Energ. Environ. Sci.* 11, 331 (2018) [doi:10.1039/C7EE01657C](https://doi.org/10.1039/C7EE01657C)
- D. Bongartz, **A. Mitsos**, Deterministic global optimization of process flowsheets in a reduced space using McCormick relaxations. *J. Global Optim.*, 69, 761 (2017) [doi:10.1007/s10898-017-0547-4](https://doi.org/10.1007/s10898-017-0547-4)