

Autonomous Systems and Control
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RESEARCH INTERESTS

Convex Optimization; Dynamical Systems; Monotone Operators; Systems and Control

PROFESSIONAL EXPERIENCE

Industrial Experience

- since 08/2023 **Research Scientist**
Corporate Research, T FOA ASY-DE
Siemens AG, Munich, Germany
- 11/2021–07/2023 **Systems and Control Engineer**
Research and Development, AEGA System Design
MTU Aero Engines AG, Munich, Germany
- 04/2014–07/2014 **Graduate Research Intern**
Corporate Research, AEH Control Theory
Robert Bosch GmbH, Stuttgart Area, Germany

Research Experience

- 09/2015–10/2021 **Research and Teaching Assistant**
Institute for Systems Theory and Automatic Control
University of Stuttgart, Germany
- 10/2014–07/2015 **Graduate Research Assistant**
Department of Mechanical and Aerospace Engineering
University of California, San Diego, CA, USA
- 06/2012–09/2012 **Undergraduate Research Assistant**
Department of Electrical and Computer Engineering
National University of Singapore, Singapore

EDUCATION

- 09/2015–12/2022 **Ph.D., Systems, Optimization and Control**
University of Stuttgart, Germany
- 10/2012–08/2015 **M.Sc., Engineering Cybernetics**
University of Stuttgart, Germany
- 10/2008–09/2012 **B.Eng., Mechanical Engineering**
Deggendorf Institute of Technology, Germany

HONORS AND AWARDS

- 2014–2015 **Dr. Jürgen und Irmgard Ulderup Fellowship**
- 2011–2015 **Fellow of German Academic Scholarship Foundation**
(Studienstiftung des deutschen Volkes)
- 2010–2012 **Fellow of German Academic Exchange Service**
(Deutscher Akademischer Austauschdienst)

TEACHING ASSISTANCE

2020–2021	Systems and Control (Undergraduate Course), University of Stuttgart
2016–2020	Nonlinear Control (Graduate Course), University of Stuttgart
Summer 2019	Convex Optimization (Graduate Course), University of Stuttgart
Winter 2017	Introduction to Automatic Control (Undergraduate Course), University of Stuttgart
Winter 2015	Introduction to Adaptive Control (Graduate Course), University of Stuttgart

INVITED TALKS

01/2023	Learning and Dynamical Systems Group , Max Planck Institute for Intelligent Systems, Tübingen, Germany
11/2022	Research Seminar Dynamical Systems , University of Passau, Germany

PROFESSIONAL SERVICE

Membership in Professional Societies

since 2015	Society of Industrial and Applied Mathematics (SIAM)
since 2014	Institute of Electrical and Electronics Engineers (IEEE)
since 2014	Control Systems Society (CSS)

Reviewer

Automatica; IEEE Control Systems Letters; IEEE Transactions on Automatic Control; Optimization; SIAM Journal on Control and Optimization

PUBLICATIONS

Journal Articles

- [J-03] **S. K. Niederländer**, *On the Arrow–Hurwicz differential system for linearly constrained convex minimization*, Optimization (2023), DOI: 10.1080/02331934.2023.2215799
- [J-02] **S. K. Niederländer**, *Second-order dynamics with Hessian-driven damping for linearly constrained convex minimization*, SIAM J. Control Optim., 59 (2021), pp. 3708–3736.
- [J-01] J. Cortés and **S. K. Niederländer**, *Distributed coordination for nonsmooth convex optimization via saddle-point dynamics*, J. Nonlinear Sci., 29 (2019), pp. 1247–1272.

Conference Proceedings

- [C-03] **S. K. Niederländer**, *Ergodic convergence results for the Arrow–Hurwicz differential system*, in Proc. IEEE Conf. Decis. Control, Singapore, 2023, pp. 7293–7298.
- [C-02] **S. K. Niederländer**, F. Allgöwer and J. Cortés, *Exponentially fast distributed coordination for nonsmooth convex optimization*, in Proc. IEEE Conf. Decis. Control, Las Vegas, NV, USA, 2016, pp. 1036–1041.
- [C-01] **S. K. Niederländer** and J. Cortés, *Distributed coordination for separable convex optimization with coupling constraints*, in Proc. IEEE Conf. Decis. Control, Osaka, Japan, 2015, pp. 694–699.

Other Works

- [O-02] **S. K. Niederländer**, *Dynamical approaches to linearly constrained convex minimization*, Ph.D. Thesis, University of Stuttgart, 2022.
- [O-01] **S. K. Niederländer**, *Distributed continuous-time coordination for nonsmooth convex and robust optimization*, Master Thesis, University of Stuttgart, 2015.

REFERENCES

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