

Institute for Systems Theory and Automatic Control
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RESEARCH INTERESTS

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

APPOINTMENTS

since 11/2021	Systems and Control Engineer MTU Aero Engines AG, Munich, Germany
10/2014–07/2015	Graduate Research Assistant Department of Mechanical and Aerospace Engineering University of California, San Diego, CA, USA Advisor: Prof. Jorge Cortés
06/2012–09/2012	Undergraduate Research Assistant Department of Electrical and Computer Engineering National University of Singapore, Singapore

EDUCATION

09/2015–10/2021	Ph.D., Mechanical Engineering Institute for Systems Theory and Automatic Control University of Stuttgart, Germany Advisor: Prof. Dr.-Ing. Frank Allgöwer
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

2015	Jacobs Fellowship , University of California, San Diego (declined)
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 (2022), submitted.
- [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-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.

REFERENCES

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