

Institute for Systems Theory and Automatic Control  
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## RESEARCH INTERESTS

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

## PROFESSIONAL EXPERIENCE

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### *Industrial Experience*

- since 11/2021      **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
- 10/2011–03/2012    **Undergraduate Research Intern**  
Research and Development, System Architect Electric  
ASM Assembly Systems GmbH & Co. KG, Munich, 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

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- 09/2015–10/2021    **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

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- 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

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

INVITED TALKS

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01/2023	<b>Learning and Dynamical Systems Group</b> , Max Planck Institute for Intel- ligent Systems, Tübingen, Germany
11/2022	<b>Research Seminar Dynamical Systems</b> , University of Passau, Germany
07/2020	<b>Systems Theory Colloquium</b> , University of Stuttgart, Germany

PROFESSIONAL SERVICE

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*Membership in Professional Societies*

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

*Reviewer*

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

PUBLICATIONS

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*Journal Articles*

- [J-03] **S. K. Niederländer**, *On the Arrow–Hurwicz differential system for linearly constrained convex minimization*, Optimization (2022), to appear.
- [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.

*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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**Prof. Dr.-Ing. Frank Allgöwer**

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University of Stuttgart, Germany

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**Prof. Dr.-Ing. Christian Ebenbauer**

Chair of Intelligent Control Systems

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updated on April 27, 2023