

TAOUBA JOUINI

ADDRESS

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CONTACT

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REFERENCES

Lund University, LTH
Thesis advisor, collaborator

Prof. Anders Rantzer
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Co-advisor, collaborator

Dr. Emma Tegling
E-mail: emma.tegling@control.lth.se

TU- Eindhoven
Collaborator

Prof. Zhiyong Sun
Email: z.sun@tue.nl

EDUCATION

Doctoral degree (Dr.)
January 2022

Control engineering at ETH Zürich and LTH, Lund
1. Inverse optimal feedback control
2. Synchronization in networked oscillatory systems
3. Application to inverter-based power systems

Master of Science (MSc.)
June 2016

Cybernetics engineering, University of Stuttgart
Excellent

Bachelor. of Science (BSc.)
October 2013

Cybernetics engineering, University of Stuttgart
Excellent

German language Certificate
June 2010

Studienkolleg, University of Heidelberg
Excellent, DSH-3

Baccalaureat
June 2009

Bourguiba Pioneer School of Tunis (LBT)
With distinction

RESEARCH EXPERIENCE

Grad Research Assistant
August 2019 - January 2022

Lund University, LTH
Department of Automatic Control

Grad Research Assistant
December 2016 - March 2019

ETH Zurich
Automatic Control Laboratory (IfA)

Visiting Research Student
December 2015 - May 2016

ETH Zurich
Automatic Control Laboratory (IfA)

Undergrad Research Assistant
May 2013 - October 2013

University of Stuttgart
Institute of System Theory and Automatic Control (IST)

TEACHING ASSISTANCE

Lund University, LTH
SS 2020/SS 2021

Network Dynamics
MSc. level course
Prof. Giacomo Como

WS 2019/2020

System Identification
MSc. level course
Prof. Rolf Johansson

ETH Zurich
WS 2018/2019

System Identification
MSc. level course
Prof. Roy Smith

SS 2018

Signals and Systems II
BSc. level course
Prof. John Lygeros

WS 2017/2018

Control System I
BSc. level course
Prof. Florian Dörfler

STUDENT SUPERVISION

Project course, LTH
November 2019 - December 2019

Identification of an inverted pendulum
Johan Lindberg, Erik Liljeroth, Magnus Svensson

Semester project, ETH Zurich
December 2017 - May 2018

Simulation of a Synchronous Machine Model
Simon Hobi

- Joint supervision with Power Systems Laboratoy (PSL): Uros Markovic, Prof. Gabriela Hug

Semester project, ETH Zurich
September 2017 - February 2018

Adaptive provision of virtual inertia on a transmission system level
Chu Zhongda

- Joint supervision with Power Systems Laboratoy (PSL): Uros Markovic, Prof. Gabriela Hug

REVIEW ACTIVITY

Journals

IEEE Transactions on Automatic Control (TAC)
IEEE Transactions on Control of Network System (TCNS)
IEEE Control System Letters (L-CSS)
International Journal of Robust and Nonlinear Control
IEEE Transactions on Smart Grid (TSG)
Elsevier Energy Books

Conferences

IEEE Conference on Decision and Control (CDC)
American Control Conference (ACC)
Mediterranean Conference in Control and Automation (MED)
IEEE Smart GridsCom

INVITED TALKS

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| <i>December 2020</i> | Control of converter-based power systems: An overview <i>Industrial Engineering and Automation Department, LTH, SE</i> |
| <i>November 2020</i> | Vistas in stability and control in power systems <i>Department of Automatic Control, LTH, SE</i> |
| <i>September 2019</i> | Parametric local stability in a multi-converter system <i>Department of Automatic Control, LTH, SE</i> |
| <i>December 2018</i> | Local synchronization of two converters via matching control, <i>Automatic Control Laboratory, ETH Zürich, CH</i> |
| <i>May 2018</i> | Control of power converters via matching of synchronous machines <i>ABB - IfA Meeting, Automatic Control Laboratory, ETH Zurich, CH</i> |
| <i>February 2018</i> | Grid-forming Control for Power Converters based on Matching of Synchronous Machines, <i>Automatic Control Laboratory - EPFL, CH</i> |

INDUSTRIAL EXPERIENCE

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| Internship <i>April 2015 - September 2015</i> | ETAS - Bosch GmbH Yokohama-Kanagawa, Japan |
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Tasks: Setup of complex new hardware-in-the-loop test environment (gasoline system), work with simulation models, multiple ETAS tools, Engine Control Unit (ECU) software and hardware.

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| Student intern <i>September 2013 - December 2014</i> | Bosch - GmbH Feuerbach and Schwieberdingen, Stuttgart |
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Tasks: Java web application, Richfaces, reviewing the corresponding databank, help with migration on new server.

PROGRAMMING AND LANGUAGE SKILLS

Extensive knowledge of Matlab and Simulink
Extensive knowledge of LaTeX
Python, Julia, Git
Mathematica
Java, XML, HTML, C++, C

English: Excellent (C1)
German: Excellent (C1)
French: Excellent (C1)

HONORS AND AWARDS

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| <i>December 2015 - May 2016</i> | Swiss European Mobility Program Scholar |
| <i>September 2009 - October 2016</i> | Tunisian - DAAD Full Government Scholarship <i>Supervisors: German Academic Exchange Service (DAAD)</i> <i>Tunisian Ministry of Higher Education and Scientific Research</i> |

MEMBERSHIPS

IEEE Student member
IEEE WIE (Women In Engineering) member
VDI (Verein Deutscher Ingenieure e.V.) member

SOCIAL PROJECTS

Project Management

Unsere Welt spricht weiblich

Association of Tunisian University Graduates (VtAS)

January - Novembre 2014

Supervisor: Forum der Kulturen in Stuttgart in the frame of the project initiative financed by
Abteilung für Integration der Stadt Stuttgart and Bundesrat für Migration and Flüchtlinge.

Partners: Association of Mongolian University Graduates

PUBLICATIONS

All publications can be found under my Google scholar profile or my persistent digital identifier for researchers (ORCID) **0000-0002-0461-7273**.