

Dipl.-Ing. Dr. Daniel Muschick, BSc

born 1983 in Graz (A)

Education and Experience

2001	A-levels at AHS Seebachergasse (Graduated with distinction)
2002	Civilian service
2001-2008	M.Sc. in Telematics (Computer Engineering) at Graz University of Technology with specialisation in automation and control (Graduated with distinction)
2006-2007	Year abroad (Erasmus; Lille, France)
2008-2014	Ph.D. in Control Engineering at Graz University of Technology Dissertation: "Online-Parameteridentifikation bei Asynchronmaschinen" (Graduated with distinction)
2009-2010	Scientific employee at the Institute of Automation and Control at Graz University of Technology Project „Collaborative Microdrones“
2010-2014	University assistant at the Institute of Automation and Control at Graz University of Technology Research focus: Online parameter identification for induction motors
Since 2015	Scientific employee at BEST – Bioenergy and Sustainable Technology (formerly known as BIOENERGY 2020+ GmbH), location Graz Area: Automation and Control

Research Areas

- Optimization-based energy management for hybrid energy systems
- Modelling, simulation and control of combustion and thermal processes as well as robots in agriculture
- Simulation and control of heating systems and networks

Selected Publications

Muschick D., Zlabinger S., Moser A., Lichtenegger K., Göllles M.: *A multi-layer model of stratified thermal storage for MILP-based energy management systems*. – in: Applied Energy (2022)

Kaisermayer V., Binder J., Muschick D., Beck G., Rosegger W., Horn M., Göllles M., Kelz J., Leusbrock I.: *Smart control of interconnected district heating networks on the example of "100% Renewable District Heating Leibnitz"*. – in: Smart Energy. 2022 Apr 7. 100069.

Kaisermayer V., Muschick D., Göllles M., Horn M.: *Operation of coupled multi-owner district heating networks via distributed optimization*. – in: Energy Reports (2021)

Kaisermayer V., Muschick D., Göllles M., Horn M.: *Progressive Hedging for Stochastic Energy Management Systems – The mixed integer case*. – in: Energy Systems (2021)

Moser A., Muschick D., Göllles M., Nageler P., Schranzhofer H., Mach T., Ribas Tugores C., Leusbrock I., Stark S., Lackner F., Hofer A.: *A MILP-based modular energy management system for urban multi-energy systems: Performance and sensitivity analysis*. – in: Applied Energy (2020)

Unterberger V., Nigitz T., Luzzu M., Muschick D., Göllles M.: *Adaptive Methods for Energy Forecasting of Production and Demand of Solar Assisted Heating Systems*. – in: Proceedings of the ITISE 2018 International Conference on Time Series and Forecasting (2018)