Curriculum Vitae

Prof. Dr. Jens Jäkel

HTWK Leipzig University of Applied Science
Faculty of Engineering (F ING)
Chair of System Theory and Mechatronics

PF 30 11 66
04251 Leipzig
Germany

E-Mail: jens.jaekel@htwk-leipzig.de
Tel. +49 (0)341 3076 1125

Employment History

04/2005 – present	**HTWK Leipzig University of Applied Science,** Leipzig (Germany) Faculty of Engieneering Chair of System Theory and Mechatronics 10/2011 – 03/2019 Dean (elected) of the Faculty of Electrical Engineering and Information Technology 04/2019 – 09/2021 Dean (elected) of the Faculty of Engineering
03/1998 – 04/2005	**Forschungszentrum Karlsruhe**, Karlsruhe (Germany) Institute for Applied Computer Science Postdoc / Research Associate
02/1994 – 12/1995	**HTWK Leipzig University of Applied Science,** Leipzig (Germany) Department of Electrical Engineering and Information Technology Research Associate

Academic Qualifications

01/1996 – 12/1997	**HTWK Leipzig University of Applied Science,** Leipzig (Germany) Doctoral Student Automation Technology
07/1999	**Karlsruhe Technical University**, Karlsruhe (Germany) Department of Mechanical Engineering Dr.-Ing. (Ph.D) Thesis: Linguistic Fuzzy Systems and their Application in Modeling and Control
08/1990 – 1/1994	**Leipzig Technical University,** Leipzig (Germany) Electrical Engineering Field of Study Control Engineering and Measurement Technology
8/1988 – 07/1990	**Moscow Intitute of Chemical Engineering**, Moscow (Russia) Electrical Engineering

Field of Study Automation Technology

Research and Teaching Interests

Modeling and Simulation, Control Engineering, Model-Based Control Design, Machine Learning in Automation and Robotics, Mechatronic Systems Design, Human-Robot Interaction, Human-Machine Interaction

Research Experience

2024 – present	Modelling, simulation and control of soft robotic for medical applications (PI)
2017 – present	AI and Digital Twin-based condition monitoring and predictive maintenance of compressor and turbine systems (PI)
2017 – 2022	Design of exoskeleton control applied to the lower limbs (PI)
2014 – 2022	Safe Human-Robot Interaction (PI)
2014 – 2016	Model-based compressor control (PI)
2013 – 2015	Design methodology for HiL simulations for control engineering of fluid-dynamic systems (PI)
2013 – 2014	Development of robotic handling system for Human-Robot interaction (PI)
2012 – 2014	Development of control system for UAV-camera system (PI)
2011 – 2013	Development of HiL Simulation system for control engineering and test for turbine and compressor systems (PI)
2009 – 2011	Development of a Measurement System for Instability Detection in Turbo Compressors (PI)
2009 – 2011	Development of optoelectronic, noninvasive, mobile vision aid (PI)
2003 – 2006	Toxicogenomic responses of Zebrafish embryos (research assistant, data analysis methods)
2002 – 2004	Micro array based analysis of metabolic networks (research assistant, data analysis methods)
1998 – 2002	Automatic design of fuzzy systems for classification and diagnosis (research assistant)
1994 – 1998	Ph.D project on linguistic fuzzy systems for modeling and control (Supervisor: Prof. Ehrlich, Prof. Bretthauer)
1994 – 1995	Development of fuzzy control systems for greenhouse climate control (research assistant)

Teaching Experience

2005 – present	Professor for System Theory and Mechatronics, Courses in System Theory, Modeling and Simulation of Dynamic Systems, Design of Mechatronic Systems, Control Theory, Robotics, Machine Learning
2000 – 2005	Lecture for Computational Intelligence, University of Karlsruhe
2000 – 2004	Lecture for System Theory, University of Cooperative Education Karlsruhe