



Stefan Werner

Professor



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Stefan Werner is Professor at the Department of Electronic Systems. He is a member of the Signal Processing Group. He is also an Adjunct Professor with Aalto University in Finland, and an Adjunct Senior Research Fellow with the Institute for Telecommunications Research, University of South Australia. Professor Werner has an M.Sc. from the Department of Electrical Engineering at KTH Royal Institute of Technology in Sweden, and a D.Sc. (with honors) from the Department of Electrical and Communications Engineering at Helsinki University of Technology in Finland.

Open Positions

No funded positions available at the moment.

Research Interests

- Statistical signal processing
- Wireless communications
- Adaptive signal processing and machine learning
- Internet of things
- Smart electric power grids

Areas of Expertise

Wireless communications, statistical signal processing, adaptive filtering and learning. In these areas, he has published roughly 170 scientific journals and conference publications.

He has extensive credentials and experience on the advancing of theory and applications of set-membership adaptive filtering and adaptive networks, which offer viable solutions to event-triggered sensing, processing and communication in wireless sensor network. In this area he has developed and analyzed new approaches that feature reduced internode communication.

His research within wireless communication includes, e.g., analysis and design of full-duplex relaying, MIMO communication, and RF impairment modelling and compensation. The early publications on full-duplex relaying are highly cited and have opened up a new area of research which has been very active during the recent years.

More recently, he has looked into the development of smart grid technologies, particularly those that are relevant to advancing the communications and networking infrastructure of the power grid.

Recent Work Experience

- 2016- Professor, Dept. of Electronics and Telecommunications, NTNU
- 2016- Adjunct Professor, Aalto School of Electrical Engineering, Finland
- 2014-2016 Senior Research Scientist, Aalto School of Electrical Engineering, Finland
- 2014- Adjunct Senior Research Fellow, University of South Australia, Australia
- 2010-2014 Academy Research Fellow, Academy of Finland/Aalto University, Finland
- 2009-2014 Docent, Aalto University, Finland
- 2003 Visiting researcher, Federal University of Rio de Janeiro, Brazil
- 2002-2008 Senior Researcher, Signal Processing Laboratory, Helsinki University of Technology, Finland

Selected Research Funding

- Aug 2018 - "Resource-aware IoT with Enhanced Intelligence and Security." Research Council of Norway
- Apr 2017- Dec 2018 "ART: Autonomous Resource-constrained Things." Research Council of Norway
- Sep 2016-Aug 2020 "Robust Demand-End Optimization with Event-Triggered Situational Awareness." Academy Project funding by Academy of Finland
- Jan 2009-July 2014 "Distributed and Resource Efficient Parameter Estimation in Sensor and Wireless Networks." Academy Fellow funding by Academy of Finland
- 2012-2014 "ICT & Energy," one of four projects in ELEC's Energy Efficiency Program

Membership in Academic Committees

- 2007- Senior member of IEEE
- 2002-2007 Member of IEEE
- 2014- Affiliated member of IEEE SPTM Technical Committee
- 2011-2014 Member of ICT Strategy Group for Aalto ELEC

Editorial Work

- 2009- Member of the Editorial Board, Signal Processing (EURASIP/Elsevier Journal).

He has supervised 8 doctoral candidates, and 10 MSc candidates.

Google Scholar

Autonomous Adaptive Sensing

Norwegian University of Science and Technology