



Biennial since 1998

CSNDSP
2020

Special Session on Advanced Techniques for CAV

Dr Sujan Rajbhandari

Coventry University
ac1378@coventry.ac.uk



Dr Sujan Rajbhandari

(SMIEEE) is a Senior Lecturer at Coventry University, where he is working in the

field of optical wireless communication. He received his PhD from Northumbria University in 2010. He was at Northumbria University working as a senior research assistant and research fellow from 2009 until 2012. He joined communications research group at the University of Oxford in 2012 and worked in the prestigious EPSRC's funded Ultra-parallel visible light communications (UP-VLC) project which was a collaboration of five UK's leading Universities (Oxford, Cambridge, St Andrews, Edinburgh and Strathclyde). In 2015, he joined Coventry University as a lecturer in electrical and electronic Engineering and promoted to senior lecturer in 2017. He is a senior member of IEEE and an associate member of the Institute of Physics.

Dr Bo Tan

Tampere University
bo.tan@tuni.fi

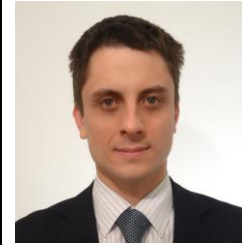


Dr Bo Tan is tenure track Assistant Professor in Tampere University Faculty of Information Technology and Communication

Sciences (ITC) Finland, where he is working in connectivity and sensing for intelligent machines. He received his PhD in digital communication from The University of Edinburgh in Nov 2013 and joined University College London and University of Bristol as postdoc researcher in radar system design until 2016. He participated in UK EPSRC SPHERE IRC (EP/K031910/1) and ERC CHAOSNETS (279976) projects. He was a Co-I in UK EPSRC OPERA project (EP/R018677/1, 2018 ~ 2020) before joining Tampere University. His research covers wireless connectivity solution for autonomous systems, non-intrusive radio sensing and phase array radar for healthcare and indoor robotic navigation. His research on passive wireless sensing has been granted patent and in joint development with industries.

Pawel Jaworski

HORIBA MIRA Ltd, Horizon Scanning Department
pawel.jaworski@horiba-mira.com



Dr Pawel Jaworski

is the CAV (Connected Autonomous Vehicles) Innovation Lead in the Horizon Scanning

department of HORIBA MIRA. His main background is in computer science, specifically in software engineering for parallel and distributed computing. In 2013 Pawel was awarded a PhD for his research in traffic management systems for connected autonomous vehicles and the development and implementation of novel Cloud based Traffic Management Systems (CTMS). He joined HORIBA MIRA in 2014, his responsible for planning and leading CAV research activities in the department, as well as designing and developing software and simulation platforms to support research in multiple areas. He is the principal investigator in the InnovateUK funded Digital CAV Proving ground CR&D project.

Scope of the session

Connected and automated vehicle (CAV) is a paradigm-shifting transportation concept that has a great potential reshaped future transport system. Though CAV is a relatively new concept, a number of advancement has been made to ensure the effectiveness of CAV. Communication, signal processing, sensor fusion and artificial intelligence have been the key technologies that have underpinned the recent advancement in the CAV. The focus of the special session will be on the recent advancement in key technologies for CAV including (but not limited to): artificial intelligence, advance signal processing and communication, sensor development and fusion and pedestrian detection.

Prospective authors are invited to submit original and unpublished work on the following research topics related to this Special Session:

- Advance signal processing
- Radio sensing for vehicles
- Multi-sensor fusion
- Fusion of communications and sensing
- Machine learning and artificial intelligence
- Pedestrian and object detection
- Human-machine interaction
- Localization and mapping
- Security