Bo Tan

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Degrees
2008 ~ 2013   **University of Edinburgh, UK**
- **PhD** in Digital Communications, granted in 23/11/2013
- Thesis: Statistical Channel Modelling and Relay for Powerline Communications

Training and Certificate
2017-2018   **Certificate of Higher Education in UK**
2012-2014   **Elective MBA modules:** New Venture Development, Strategic Innovation **London Business School, UK**

Current Employment
12/2023 ~ Present   Tampere University, Faculty of Information Technology and Communication Sciences, FI
- Position: Associate Professor in radar and communications
- Research: Signal processing and machine learning for sensing and communications, applications in intelligent machines
- Lecturing: Radar and professional communications

04/2019 ~ 11/2023   Tampere University, Faculty of Information Technology and Communication Sciences, FI
- Tenure Track Assistant Professor in radar and communications

Previous Work Experience
2017 ~ 2019   Coventry University, Faculty of Engineering, Environment and Computing, UK
- Lecturer (Assistant Professor) of Electronics Engineering
- Member of Institute for Future Transport and Cities, Coventry University

2016 ~ 2017   University College London, Department of Computer Science, UK
- Postdoc Researcher in Network and System Group, on RF-enabled through-wall mapping and navigation for robot
- Funding Source: ERC CHAOSNETS (no. 279976) lead by Prof Kyle Jamieson (Princeton University)

2015 ~ 2016   University of Bristol, Department of Electronics and Electrical Engineering, UK
- Postdoc Researcher in SPHERE Project, on wireless sensing and indoor localization in healthcare
- Funding Source: EPSRC IRC SPHERE project (EP/KO31910/1) lead by Prof Ian Craddock

2012 ~ 2015   University College London, Department of Electronics and Electrical Engineering, UK
- Postdoc Researcher (2012~14) in Radar Group, on signal processing and system design of passive radar
- Secondment Researcher in u-blox UK on indoor localization during Aug ~ Nov 2014
- Funds Source: UCL Enterprise Award, UCL/EPSRC Discovery-to-Use Award Lead by Prof Karl Woodbridge

2008   Vodafone China, Commercial Sector, Beijing, China
- Commercial Assistant: Marketing research on mobile finance and corporation service

2005 ~ 2007   StarPoint Communications, R&D, Beijing, China
- Hardware Engineer: baseband processing unit design for 3G UE test instruments

Research Funding/Grants/Awards
2022   PI of **5G-PSS** (2022~24, €940K, **Business Finland**, **Nokia Veturi Program**, 6868/31/2021): Algorithmic Design of 5G Positioning, Sensing and Security Functions in SoC

2021   PI of **SPHERE-DNA** (2021~24, €850K, **Academy of Finland**, **ICT 2023**, 345681, lead the TAVIDS consortium): Secure and Privacy-Preserving Healthcare in the Residential Environment with Multimodal Distributed Data and Decentralized AI

2021   PI of **ACCESS** (2021~25, €650K, **Academy of Finland**, 339519): Autonomous Communication Converged with Efficient Sensing for UAV Swarms

2020   PI/Coordinator of **DIOR** (2022~26, €1.6M, **H2020 MSCA**, 101008280): Deep Intelligent Optical and Radio Networks

2020   Co-I of **NewSense** (2021~23, €943K, **H2020-SESAR JU**, 893917): Evaluation of 5G Network and mmWave Radar Sensors to Enhance Surveillance of the Airport

2018   Co-I of **PARK-IT** (2019~20, £500K, **Innovate UK**, Meridian 3): Autonomous Highway, Rural and Parking Test Facilities (quit due to job change to Finland)

2018   Co-I of **OPERA** (2019~22, £1.3m, **UK EPSRC IRC**, EP/R018677/1): Opportunistic Passive Radar for Non-Cooperative Contextual Sensing (quit due to job change to Finland)

2017   PI of Data-Driven Research and Innovation (**DDRI**) Grant (2017~20, £75K, Coventry University): full funding for PhD

2014   Beneficiary (£10K, **UK EPSRC BITE**): Industrial (u-Blox) secondment for short-range positioning

Publications
Overall Publications Summary: 90+ peer-reviewed papers, 3 book chapters (Full publications list).

Other Research Outputs:
2021 ~ 22   **Tri-Sense+** multiple modal indoor **sensing platforms,** for the SPHERE-DNA project, and **two datasets** collected for machine learning-based indoor activity recognition and localization.
2016   16 channel **phased array indoor mapping radar system** for robots in ERC CHAOSNET project

2013 ~ 17   Multiple radio sensing **datasets** for **healthcare** research, lead to **30+** research papers
2015   Pervisave in-home **radio sensing platform** for healthcare in UK EPSRC IRC SPHERE project
2015   **US Patents**: WO2015063488A1, Apparatus and Method for Performing Passive Sensing
2012 ~ 14   Passive radar **prototype** and **software pack**, **demos** for leading industries e.g. Chemring, Honeywell, Samsung
2004 ~ 07   Commercialized **3G baseband processing PXI board** for StarPoint Communications

Supervision

Current supervision: 2 postdocs, 4 PhD in supervision, 2 co-supervised PhDs and 6 MSc theses in Tampere University; 1 ongoing co-supervised PhD in Coventry University, UK
Past supervision: 1 completed PhD (2017~2021) in Coventry University, UK.

Other Services

PhD theses examiner of University of Oulu, University of Technology Sydney
Services: Vice Chair, IEEE Finland AP/MTT/ED-S Chapter; Associate Editor IEEE Wireless Communications Letter
Member: IEEE, ACM
Reviewer: IEEE Transactions on Wireless Communications, IEEE Transactions on Communications, IEEE Wireless Communications Magazine, IEEE Communication Letters, IEEE Journal of Selected Topics in Signal Processing, IEEE Transactions on Aerospace and Electronic Systems, IEEE Journal of Translational Engineering in Health and Medicine, IEEE Sensor Journal, IEEE Access, ACM Transactions on Internet of Things, EURASIP, and IEEE, IET conferences on communications and radar.
Organizer: Workshop proposals on "Towards Intelligent Non-Terrestrial Networks" in SPAWC 2023 and GlobeCom 2023; Special session in hybrid RF and VLC communications in IEEE CSNDSP'20; The 1st International Workshop on Healthcare with Intelligent Sensing, System and Data 2018,
Technical Program Committee: VTC'20'21'22, ICL-GNSS'20 '21, IEEE WPMC'16 '17 '19, IEEE iWEM'17