

## Curriculum Vitae FREDRIK TUFVESSON

**Title:** Professor of Radio Systems

**Date and place of birth:** March. 14, 1970, Lund, Sweden

**Nationality, sex:** Swedish, male

**Affiliation:** Lund University, Dept. of Electrical and Information Technology,  
Box 118, SE-221 00 Lund, Sweden  
Email: fredrik.tufvesson@eit.lth.se  
Homepage: <http://www.eit.lth.se/staff/fredrik.tufvesson>  
Google Scholar: <https://scholar.google.se/citations?user=B5pXQGgAAAAJ>

**Education:** 2007, *Docent* (~ habilitation, reader, senior lecturer) in Radio Systems, Lund University  
2000, Ph.D. in Applied Electronics/Radio Systems, Lund University  
1998, Licentiate in Engineering in Applied Electronics, Lund University,  
1994, M.Sc. in Electrical Engineering, Lund University,

### Academic employments:

2014 – Professor in Radio Systems,  
Department of Electrical and Information Technology, Lund University  
2003 – 2014 Associate Professor in Radio Systems,  
Department of Electrical and Information Technology, Lund University  
2002 – 2003 Researcher, Department of Electrosience, Lund University  
2000 – 2002 System specialist, Fiberless Society, Lund, Sweden  
1995 – 2000 Ph.D. candidate, Department of Applied Electronics, Lund University

### Post doc:

2000 – 2002 System specialist at a startup company, Fiberless Society

### Major research grants and project experience:

2021-2024 “Reindeer - REsilient INteractive applications through hyper Diversity in Energy Efficient RadioWeaves technology“, EU H2020, 4.6 MEUR (LU: 746 kEUR), co-applicant  
2021-2025 “Large Intelligent Surfaces Architecture and Hardware“, SSF, 32.6 MSEK, co-PI  
2020-2024 “MINTS, Millimeter-wave NeTworking and Sensing for Beyond 5G), EU H2020 ITN, 3.9 MEUR (LU: 564 kEUR),  
2019-2022 “5G-SMART, 5G for smart manufacturing”, EU H2020, 10.2 MEUR (LU: 249 kEUR)  
2019-2022 “MIMO-Sensor for Positioning and Autonomous Drive, MIMO-PAD”, FFI/Vinnova, 22.7 MSEK (LU: 1.3 MSEK), co-applicant  
2019-2023 “Optimizing Radio Access Networks for efficient massive MIMO operation ”, SSF industrial PhD student, 2.5 MSEK, PI  
2019-2022 “Massive MIMO technologies and applications”, Ericsson AB, project leader  
2018-2021 “Simulation and verification of wireless technologies”, FFI/Vinnova, 28.3 MSEK (LU: 3.9 MSEK), co-applicant  
2016-2019 “Highly accurate phase based positioning”, VR, 3.6 MSEK, PI  
2015-2025 “Wallenberg Autonomous Systems Program”, KAW, 1 800 MSEK (originally), co-applicant  
2013-2017 “Wireless Communication in Automotive Environment”, FFI/ Vinnova, 71 MSEK  
2012-2017 ”Distributed Antenna Systems for Highly Efficient Wireless systems”, Swedish Foundation for Strategic Research (SSF), 27.2 MSEK, PI

**Publications:** 7 book chapters, 100 journal papers, 150 conference papers, 6 patent applications. H-index 63, 29 500 citations (Google scholar, Aug. 2022). See [www.eit.lth.se/staff/fredrik.tufvesson](http://www.eit.lth.se/staff/fredrik.tufvesson) for a full list of publications.

**Editorship, conference chairing and review assignments:** Associate editor for IEEE Transactions on Wireless Communications, 2009 – 2013. Co-chair of Wireless Communication Symposium at IEEE International Conference on Communications 2013. In total we managed 462 submitted papers and 260 Technical Program Committee members. 175 papers were presented at the conference held in Budapest, Hungary, June 2013. Reviewer for a number of journals such as IEEE Trans. Comm., IEEE Trans. Wireless Comm., IEEE Trans. Vehicular Techn., IEEE Sel. Areas in Comm., IEEE Trans. Ant. and Prop., IEEE Trans. Sig. Proc.

**Selected invited talks and tutorials:**

EuCAP 2021, Keynote, Propagation and Channel modelling for automotive environments, March 2021 IEEE Globecom, workshop on Channel Models and Measurements for mmWave Bands, "High-resolution dynamic characterization of mm wave channels", Dec 2018

Invited talk, New frontiers in Channel modeling, "Massive MIMO channel characterization and modeling", EuCAP 2017, Paris, France, March 2017

IEEE Communications Society webinar, "Massive Signal Processing for Massive MIMO: Challenges and Lessons Learned", October 18, 2016.

Panel at IEEE PIMRC "mmWave - The Path to 5G Enhanced Mobile Broadband", August 2016

Keynote at IEEE Intelligent Vehicles Symposium (IV16), Workshop on Cooperative Communication and Positioning (CCP), "Channel characteristics for cooperative ITS and positioning", Gothenburg, Sweden, June 19, 2016

**Awards:** IEEE Communications Society best tutorial paper award 2018, 2021, IEEE Fellow 2017, Neal Shepherd Memorial Award 2015 - Best propagation paper in IEEE Transactions on Vehicular Technology. Co-author of 4 conference papers that were granted best paper/student paper awards. Awards in Ventrue Cup 2006, 2011, 2013. 100 kSEK stipend to realize and commercialize a cell phone based search and rescue system.

**Supervision:** Main advisor for 8 finished PhDs, co-advisor for 5 PhDs where I took an active role, main advisor for 2 students finishing with a Licentiate in Engineering. Currently the main advisor for 8 PhD students.

**International collaboration:** Strong network with other universities and research institutes, with well-established collaboration in terms of joint projects, publications or applications, examples include: University of Southern California, US (A. Molisch), TU Vienna, Austria, (C. Mecklenbräuker), Austrian Institute of Technology, Austria (T. Zemen), Alcatel-Lucent Bell labs, USA (T. Marzetta), Aalto University, Finland (K. Haneda), KU Leuven, Belgium (L. Van der Perre). More than 50 % of the papers are written jointly with international collaborators.

**Management experience:** Co-director of the strategic research area ELLIIT, director of the Lund part (2017-); Manager of a larger cooperation project between Ericsson AB and LU (2018-), Deputy head of the EIT department (2015-2020); PI of a larger SSF project on distributed antenna systems (26 MSEK/5 years, 2012-2017); National delegate in COST 2100, IC1004, CA15104 CA20120; CTO and founder Hepkie AB (2009-2012).