

# Curriculum Vitae, Marja Matinmikko-Blue, 23.11.2017

## 1. Full name and date

- Name Matinmikko-Blue, Marja Anneli
- Gender Female
- Date of CV 23.11.2017

## 2. Date and place of birth, nationality, current residence

- Date and place of birth 19.01.1979, Rovaniemen mlk, Finland
- Citizenship Finnish
- Current residence Pielikuja 5, 90540 Oulu, Finland

## 3. Education and degrees awarded

- Doctor of Science (Technology), Telecommunication Engineering 21.12.2012  
Faculty of Information Technology and Electrical Engineering, University of Oulu, Finland.  
Supervisor: Prof. Jari Linatti. Doctoral thesis: Spectrum sharing using cognitive radio system capabilities: Methods to obtain and exploit knowledge of spectrum availability.
- Licentiate of Science (Technology), Telecommunication Engineering 14.06.2007  
Faculty of Information Technology and Electrical Engineering, University of Oulu, Finland.  
Supervisor Prof. Jari Linatti. Licentiate thesis: Estimation of spectrum requirements of IMT-Advanced systems.
- Master of Science, Industrial Engineering and Management 10.12.2001  
Faculty of Technology, Industrial Engineering and Management, University of Oulu, Finland.  
Supervisor Prof. Harri Haapasalo. Master's thesis: LS and MMSE estimation of the impulse response of fast fading channels.
- Upper secondary school 31.05.1997  
Muurolan lukio, Finland.

## 4. Other education and training, qualifications and skills

- Ph.D. degree on Industrial Engineering and Management is in finalization phase at Faculty of Technology, Industrial Engineering and Management, University of Oulu, Finland, under the supervision of Prof. Harri Haapasalo. Doctoral thesis: Stakeholder analysis for development of sharing-based spectrum governance models for mobile communications. Expected graduation 2018.
- Certified Project Manager IPMA Level C by PRYSERT - the Certification Body of Project Management Association Finland in June 2015 after participation in Professional Project Manager training programme by Management Institute of Finland in March-May 2015.
- Chairmanship skills: Project manager in more than ten research projects on wireless communications in 2005-2017. Chairmanship of cognitive radio system (CRS) work in policy making at International Telecommunication Union Radiocommunication sector (ITU-R) of United Nations in 2012-2014 and vice-chairmanship of a working group in research forum COST Action IC0905 TERRA in 2010-2014.
- Presentations skills: Invited keynote speaker at several academic conferences, regulation and standardization events, industry meetings and events for general public.
- Organization skills: Arrangement of public events to disseminate research results (e.g. Tekes LSA Trial workshop in Helsinki 2013, Trial Workshop at CrownCom conference in Oulu 2014, 5G disruptive business opportunity seminar in Oulu 2016).

- Writing skills: Experience in writing of different types of documents including 100 scientific publications in journals, conferences and books as well as up to 100 contributions to spectrum regulatory forums (ITU, European Conference of Postal and Telecommunications Administrations (CEPT)).

## 5. Linguistic skills

- Mother tongue: Finnish
- Other tongues:
 

	<u>Understanding</u>	<u>Speaking</u>	<u>Writing</u>
English	C2	C2	C2
Swedish	B1	B1	B1
German	A2	A2	A2

## 6. Current position

- University of Oulu, Centre for Wireless Communications (CWC), Oulu, Finland. University Researcher and Project Manager since 08.01.2016. Main role is being the coordinator of uO5G project consortium on Micro-operator Concept for Boosting Local Service Delivery in 5G (<http://www.oulu.fi/uo5g/>).
- Research career phase: 3) Established or Independent Researcher.

## 7. Previous work experience

- VTT Technical Research Centre of Finland Ltd., Oulu, Finland
 

Senior scientist and project manager	01.12.2010 – 07.01.2016
Research scientist	01.01.2002 – 30.11.2010
Research trainee	12.02.2001 – 31.12.2001
- University of Oulu, Finland
 

Teaching assistant, Industrial Engineering and Management (part time 50 %)	01.02.2000 – 18.06.2000 01.09.2000 – 31.12.2000
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- Nokia, Oulu, Finland
 

Logistics coordinator at Nokia base station plant	01.06.2000 – 31.08.2000
Testing in base station production	17.05.1999 – 20.08.1999

## 8. Research funding as well as leadership and supervision

- Long history of acquiring funding for research projects by being the main responsible person for preparing funding applications that resulted in total project volume of 7 M€ from EU, Tekes, Academy of Finland and companies: uO5G in 2016-2018 (Micro-operator Concept to Boost Local Service Delivery in 5G) 1.4 M€, FUTEBOL in 2016-2018 (Federated Union of Telecommunications Research Facilities for an EU-Brazil Open Laboratory) 300 000 €, CORE++ in 2015-2016 (Cognitive Radio Trial Environment+) 700 000 €, FUHF in 2015-2016 (Future of UHF) 100 000 €, CORE+ in 2013-2014 (Cognitive Radio Trial Environment+) 750 000 €, GlobalRF in 2013-2014 (Global Spectrum Opportunity Identification) 260 000 €, customer projects from telecommunication companies in 2012-2015 60 000 €, CORE in 2011-2012 (Cognitive Radio Trial Environment) 830 000 €, SMAS in 2010-2012 (Spectrum Management for Future Wireless Systems) 350 000 €, OneFIT in 2010-2012 (Opportunistic Networks and Cognitive Management Systems for Efficient Application Provision in Future Internet) 470 000 €, COGNAC in 2008-2011 (Cognitive and opportunistic wireless communication networks) 1 100 000 €, and SACRA in 2010-2013 (Spectrum and Energy Efficiency through multi-band Cognitive Radio) 600 000 €.

- Leadership experience from being the coordinator of the research project consortia in uO5G (2016-2017), CORE++ (2015-2016), CORE+ (2013-2014) and CORE projects (2011-2012) which consisted of several parallel research and industry projects. Project manager in the above mentioned uO5G, CORE++, CORE+, GlobalRF, CORE, SMAS, COGNAC, and OneFIT projects in 2006-2017.
- Chairmanship of cognitive radio studies at ITU-R WP5A in 2012-2014 including chairing of over 100 sessions at six meetings in Geneva in the preparation of two ITU-R reports.
- Second supervisor for Miia Mustonen's doctoral thesis: Analysis of recent spectrum sharing concepts in policy making, University of Oulu, 2017.
- Supervision of international research exchange: Hosting of several visiting researchers (Jesse Taylor from Illinois Institute of Technology, US, in 2014, Vania Goncalves from iMinds, SMIT – Vrije Universiteit Brussel, in 2014, Assist. Prof. Leo Fulvio Minervini from Universata di Macerata, Italy, in 2014, Assist. Prof. Wladislav Fomin from Vytautas Magnus University, Lithuania, in 2013, Dr. Javier Del Ser from TECNALIA, Spain, in 2010 and 2012, Laszlo Blazovics and Csaba Varga from Budapest University of Technology and Economics, Hungary, in 2009).

## 9. Merits in teaching and pedagogical competence

- Teaching assistant in industrial engineering and management at University of Oulu in 2000 including teaching the exercises, and preparing and evaluation of exam questions in the following courses: "Tuotannon ohjauksen perusteet" – "Principles of production management", "Tuotantolaitoksen suunnittelu" – "Planning of industrial plant", "Laadun peruskurssi" – "Basic course in quality management" and "Tuotantolaitoksen suunnittelun harjoitustyö" – "Case study of planning of industrial plant".

## 10. Awards, prizes and honours

- Recipient of the Young Scientist of the Year 2013 Award (15 000 €) from Finnish Foundation for Technology Promotion for active and successful collaboration between research, industry and regulatory domains in the development of future mobile communication networks.

## 11. Other academic merits

- Participation in COST Action IC0905 TERRA "Techno-economic Regulatory Framework for Radio Spectrum Access for Cognitive Radio/Software Defined Radio" in 2010-2014 by being Finnish Management Committee (MC) member and vice-chair of Working Group 2 (WG2) "CR/SDR co-existence studies".
- A large number of invited presentations in international academic, industry, regulation and standardization forums (e.g., 5G workshop in Brazil 2017, Wireless Innovation Forum Europe Conference in 2015, COST Action IC0905 TERRA meetings 2011-2014, ITU-R Seminar on Cognitive Radio Systems and the Use of White Spaces in 2013, keynote speech at CrownCom 2012 conference, keynote speech at MOBILIGHT 2010 conference, and CEPT workshop on cognitive radio in 2009).
- Reviewer of EU Horizon 2020 research project proposals and national funding applications in Europe.
- Opponent of Dr. Javier Del Ser's doctoral dissertation at University of Alcala, Madrid, May 2013.
- Journal paper reviewer in several international telecommunication journals: Telecommunications Policy, Telecommunication Systems, IEEE Journal on Selected Areas in Communications, IEEE Transactions on Vehicular Technology, IEEE Transactions on Wireless Communications, IEEE Communications Magazine, IEEE Systems Journal, IEEE Network Magazine, IEEE Wireless Communications Magazine, IEEE Transactions on Circuits and Systems II, IEICE Transactions on Communications, IET Communications, Springer Wireless Networks, International Journal of Network Management, and International Journal of Fuzzy Computation and Modelling (IJFCM).
- Technical Program Committee (TPC) Co-chair: Trial workshop at Conference on Cognitive Radio Oriented Wireless Networks (CrownCom) 2014, and Mobile Lightweight Wireless Systems (MOBILIGHT) 2011.

- Technical Program Committee (TPC) Member of international conferences and workshops: IEEE WCNC 2017, IEEE ICC 2017, IEEE ISWCS 2017, IEEE PIMRC 2017, IEEE GLOBECOM 2017, IEEE ISWCS 2016, IEEE PIMRC2016, IEEE Globecom'16, IEEE WCNC 2016, IEEE ICC 2016, IEEE PIMRC 2015, IEEE GLOBECOM 2015, IEEE WCNC 2015, IEEE DySPAN 2015, IEEE ICC 2015, 5GU 2014, CrownCom 2014, IEEE ISWCS 2014, IEEE PIMRC 2014, ICT 2014, IEEE PIMRC 2013, IEEE CAMAD 2013, IEEE ISWCS 2013, FUNEMS 2013, CrownCom 2013, IEEE CAMAD 2012, IEEE VTC Spring 2012, CrownCom 2012, and CrownCom 2011.

## 12. Scientific and societal impact of research

Total number of scientific publications is 103. Research has been done in close collaboration with industry with leading telecommunication companies and public sector including policy makers. Research results have been widely shared and disseminated in academic, industry and policy making forums through presentations, publications, and contributions to regulatory groups. The researcher has participated in the preparation of 100 input contributions to regulation forums (ITU-R and CEPT) leading to 11 published policy reports or recommendations. She has also actively participated in national level spectrum policy discussions with national regulators. She has co-authored one patent.

Research has high societal impact, which is achieved through active participation in policy making in European and international levels on mobile communication spectrum regulation. Active participation in international spectrum regulation at ITU-R since 2004 in Finnish delegation in the following topics:

- Cognitive radio system (CRS) studies at Working Party 5A of ITU-R (ITU-R WP5A) including meeting participation since 2011 and Chairmanship of CRS studies at ITU-R WP5A in 2012-2014. Preparation of over thirty joint input contributions with industry and Finnish Communications Regulatory Authority (FICORA) to ITU-R WP5A in 2009-2014 to promote spectrum sharing using CRS technology into Report ITU-R M.2225 and Report ITU-R M.2330.
- Studies on spectrum requirements of International Mobile Telecommunication (IMT) systems at Working Party 5D of ITU-R (ITU-R WP5D, formerly ITU-R WP8F) including participation in spectrum requirement estimation of IMT systems in 2004-2006 in preparation for World Radiocommunication Conference in 2007 (WRC-07) that made new spectrum available for mobile communication networks including preparation of over 50 joint contributions with industry and regulators. Official editorship of Recommendation ITU-R M.1768 on the ITU-R spectrum requirement estimation methodology and authorship of five book chapters. Active contribution to spectrum requirement estimation of IMT systems in 2012-2014 for WRC-15.

Active participation in policy making in European spectrum regulation at European Conference of Postal and Telecommunications (CEPT) since 2004:

- Studies on spectrum requirements of IMT systems at CEPT project team PT1 in 2004-2006 including preparation of tens of joint input contributions with industry and regulators to ITU-R via CEPT in preparation for WRC-07.
- Studies on Licensed Shared Access (LSA) spectrum sharing model at CEPT project teams FM52, FM53 and PT1 including preparation of several joint input contributions with industry and FICORA to FM52 and FM53 in 2013-2015 to promote spectrum sharing with LSA into ECC Report 205, CEPT Report 56 and CEPT Report 58. Preparation of input contributions to PT1 in 2016 on LSA for sharing in 3.6-3.8 GHz band between mobile and satellite services.

## 13. Positions of trust in society and other societal merits

- Chairmanship of cognitive radio studies in international policy making at United Nations' based ITU-R WP5A in 2012-2014.