Curriculum Vitae MARKUS RUPP

PERSONAL DATA

Citizenship:	German
Born:	May 14, 1963 Married, one daughter, one son
Address: (office)	TU Wien Institute of Telecommunications Gußhausstrasse 25/389 A-1040 Wien, Austria Internet: markus,rupp@tuwien.ac.at Tel: +431 58801 38901 Fax: +431 58801 38999
Private:	Margaretenstrasse 139/9 A-1050 Wien Austria Internet: markusrupp@aol.com Tel: +431 920 1698

EDUCATION

1981-1984	Dipl.-Ing. Nachrichtentechnik (Communication Systems) Fachhochschule des Saarlandes
1984-1988	Dipl.-Ing. Allgemeine Elektrotechnik (General Electrical Eng.) Universitaet des Saarlandes Emphasis on high frequency technique and wave theory
1988-1993	Ph.D. received in February 1993, TH Darmstadt Ueber die Analyse von Gradientenverfahren zur Echokompensation (Analysis of Gradient-Based Algorithm for Echo Cancellation)
1990	Seminar about Communication Networks Carl-Cranz-Gesellschaft e.V.
1996-1997	Courses on System- and VHDL Design Techniques
1997	Course on IS-95 CDMA Systems
1998	Course on TI-C6x Processors
1999	Course on Altera FPGA Design

PROFESSIONAL EXPERIENCE

1985-1987	Research assistant (Prof. Elmar Mangerich) at FITT (Institute for Technology Transfer between university and industry). Applications for image processing.
1988-1993	Research assistant (Prof. Eberhard Hänsler) at TH Darmstadt. Supervisor for laboratory sessions and diploma work of students and lecturer in digital signal processing. Programming Motorola DSP56000, DSP96000, ATT 16 and 32C for adaptive filters.
1993-1995	DAAD-postdoc scholarship at University of California in Santa Barbara. Deterministic robust formulations of adaptive filters.
1995-2001	Member of the technical staff at Lucent Technologies, Bell Lab. Innovations, Wireless Research Laboratory Project head for prototyping of wireless MIMO systems and for innovative concepts for fourth generation wireless.
1999-2001	Located in the Netherlands with Lucent Technologies, Bell Lab. Innovations, to work on rapid prototyping methods for wireless LANs.
Since 2001	Univ. Prof. for Digital Signal Processing in Mobile Communications at the Institute of Telecommunications (formerly Institute of Communications and Radio Frequency Engineering), TU Wien.

FACULTY EXPERIENCE

2001	Responsible for new study plan for "Kommunikations und Informationstechnologie" (KIT).
2002	Member of Selection Commission for "Professor on Telecommunication Services".
2002	Selection Commission for "Professor on Embedded Systems".
2003-2005	Member of Faculty Council.
2003-2004	Member of Selection Commission for "Professor on Telecommunication Services".
2004	Member of Habilitation Commission Admela Jukan.
2005	Head of Selection Commission for "Professor on Flexible Wireless Systems".
2005	Selection Commission for "Professor on Embedded Systems".
2005	Reviewer for Habilitation of Gerald Matz.
2003-2007	Member of Study Affairs Commission.
2005-2007	Dean of the Faculty for Electrical Engineering and Information Technology.
2008-2012	Head of Uni-Infracture IV programme on Robust Embedded Systems (RES).
2008-2013	Speaker of the Professors
2008	Member Habilitation Commission Sandford Bessler.
2009-2012	Member of WIT Team (Women in Technology).
2010	Member of Selection Commission for "Professor on Energy Systems".
2010	Reviewer for Habilitation Fabio Ricciato.
2010-2013	Member of Doctoral College in Computational Perception.
2012	Reviewer for Habilitation Thomas Zemen.
2012	Head of Selection Commission for "Professor on Communication Networks".
2012	Responsible for new master study plan in Telecommunications.
2013	Member of Habilitation Commission Alois Lugstein.
2013	Reviewer for Selection Commission for "Professor on Systems on Chip".
2014-2015	Head of Institute
2025	Responsible for joint master degree with TU Brno
2015-2017	Member Habilitation Commission Rosemarie Velik.
2016-2019	Dean of the Faculty for Electrical Engineering and Information Technology.
2020-2023	Area Chair wireless Communications
2023	Head of Selection Commission for "Professor for Machine Learning in Telecommunications"
2023	Responsible for revised master study plan in Telecommunications.
2023	Responsible for Women in Technology Workshop

AWARDS

1993	DAAD-postdoc scholarship at University of California in Santa Barbara. Deterministic descriptions of adaptive filters, ended 1995.
2002	Head of Christian Doppler Laboratory for Design Methodologies of Signal Processing Algorithms, ended in 2009.
2005	City Vienna 2005 for Diploma thesis of S. Geirhofer "Design and Real-Time Measurement of Equalization Schemes for HSDPA".
2005	Prize of Austrian Society for Information Technologies(GIT) 2005 for Diploma thesis of G. Brandmayr, "Automated Rapid Prototyping Environment for Field Programmable Gate Arrays".
2006	Vodafone prize 2006 for Diploma thesis of S. Caban and M.Mehlführer "Development and Setting Up of a 4x4 Real-Time MIMO Testbed".
2006	Best Student Paper Award at Fourth International Conference on Mobile Computing and Multimedia (MoMM2006), Yogyakarta, Indonesia, with Luca Superiori and Olivia Nemethova.
2006	Prize of Austrian Society for Information Technologies(GIT) 2006 for Dissertation of E.Aschbacher, "Digital Pre-distortion of Microwave Power Amplifiers".
2007	Prize of Austrian Society for Measurement and Automation (OGMA) 2007 for Dissertation of P.Belanovic: "An Open Tool Integration Environment for Efficient Design of Embedded Systems in Wireless Communications".
2007	Dr. Fehrer Preis 2007 for the best applied doctoral thesis of TU Vienna Prize of Austrian Society for Information Technologies(GIT) 2007 Würdigungspreis des Ministeriums and sub auspiciis promotion for Dissertation of O.Nemethova, "Error Resilient Transmission of Video Streaming over Wireless Mobile Networks".

AWARDS

2008	EEEFCOM Innovationspreis: "A Real-Time RFID Rapid Prototyping Environment for Multi Frequency-Band and Multi Standard Experiments" jointly with Robert Langwieser, Christoph Angerer, Michael Fischer, Gregor Lasser, Martin Holzer, Bastian Knerr, Lukas Mayer, Arpad Scholtz.
2008	Prize of Austrian Society for Information Technologies(GIT) 2008 for Dissertation of W.Karner: "Link Error Analysis and Modeling for Cross-Layer Design in UMTS Mobile Communication Networks".
2009	Unesco Award for fFORTE-WIT (Women in Technology) UN Dekadenprojekt
2009	Prize of Austrian Society for Information Technologies(GIT) 2009 for the Diploma thesis of Dagmar Bosanska "Channel Adaptive OFDM Systems with Quantized Feedback"
2010	Würdigungspreis des Ministeriums and sub auspiciis promotion for Dissertation of Sebastian Caban, "Testbed-based Evaluation of Mobile Communication Systems".
2010	Würdigungspreis des Ministeriums and sub auspiciis promotion for Dissertation of Martin Wrulich, "System-Level Modeling and Network Optimization for HSDPA Networks"
2010	INITS Award (3.place) for Diploma Thesis of Markus Laner, "Evaluation and Modeling of Power Control Information in a 3G Cellular Mobile Network"
2010	Prize of Austrian Society for Information Technologies(GIT) 2010 for the Diploma thesis of Markus Laner "Evaluation and Modeling of Power Control Information in a 3G Cellular Mobile Network"

AWARDS

2010	Nomination of Christoph Angerer as Austrian IEEE Joint COM/MTT Chapter Candidate for 2010 IEEE ComSoc YoungResearcher Award for EMEA
2011	Best Student Presentation Award of IEEE Forum SPRFS 2011 Robert Dallinger and Markus Rupp "Adaptive digital pre-distortion based on two-block models"
2011	Best Student Paper Award at VTC spring 2011, Budapest 15-18.5.2011. Michal Simko, Christian Mehlführer, Thomas Zemen and Markus Rupp, "Inter-Carrier Interference Estimation in MIMO OFDM Systems with Arbitrary Pilot Structure"
2011	Nomination of Christian Mehlführer as Austrian IEEE Joint COM/MTT Chapter Candidate for 2011 IEEE ComSoc YoungResearcher Award for EMEA
2012	Finalist in student contest: Ondrej Sluciak, Hana Strakova, Markus Rupp, and Wilfried N. Gansterer, "Distributed Gram-Schmidt Orthogonalization based on Dynamic Consensus," Proc. of Asilomar Conference, Nov. 2012.
2013	Inits Award (2nd place) for Dissertation of Michal Simko, "Pilot Pattern Optimization for Doubly-Selective MIMO OFDM Transmissions"
2014	Final 16 in student competition: Gerald Artner, Martin Mayer, Maxime Guillaud, Markus Rupp, "Measuring the Impact of Outdated Channel State Information in Interference Alignment Techniques," IEEE 8th Sensor Array and Multichannel Signal Processing Workshop SAM, A Coruna, June, 2014.
2014	Inits Award (1st place) for Dissertation of Stefan Schwarz, "Limited Feedback Transceiver Design for Downlink MIMO OFDM Cellular Networks"

AWARDS

2015	Nomination to IEEE Fellow: "For contributions to adaptive filters and communication technologies"
2015	EURASIP Best PhD Award for the Thesis: Christoph Angerer "Design and Exploration of Radio Frequency Identification Systems by Rapid Prototyping"
2015	Faculty Award: best Diploma Thesis: Sana Zunic, "Coordinated Scheduling and Beamforming (CS/CB) in Downlink CoMP Transmission System"
2016	Faculty Award: best Diploma Thesis: Stefan Pratschner, "Doubly-Selective Channel Estimation for LTE-A Uplink"
2017	EURASIP Meritorious Service Award "For Leadership and Activities as EURASIP Chair and for Continuous Commitment with EURASIP over the last fifteen years in almost all aspects".
2018	Faculty Award: best Diploma Thesis: Bashar Tahir, "Construction and Performance of Polar Codes for Transmission over the AWGN Channel"
2020	SEW Europrice: best Diploma Thesis: Miriam Leopoldseder, "Data Driven Prediction of Crowd Mobility in Small Cell Environments"
2021	Richard Prüller, Thomas Blazek, Stefan Pratschner, Markus Rupp, "On the Parametrization and Statistics of Propagation Graphs," Proc. of Eucap, Germany, March 2021.(**Nomination Best paper award**)
2021	Faculty Award: best Diploma Thesis: Sonja Tripkovics, "Construction of Mobile Performance Maps using Clustered Crowdsourced Measurements"
2022	Agnes Fastenbauer, Bashar Tahir, Stefan Schwarz, Markus Rupp, "Validation of NOMA System-Level Abstraction and Network Performance Evaluation," Proc. of WiMob, Thessaloniki, Greece, Oct. 2022. (**Best paper award)**

PROFESSIONAL ACTIVITIES

1984-1986	Lectures at the Fachhochschule des Saarlandes in High Frequency Technique and Digital Signal Processing.
1985	Lectures for continued education of engineers in High Frequency Technique and Digital Signal Processing.
1985	Software engineer at Siemens (Munich) for telecommunication systems.
1991	Eurasip Short Course in adaptive filtering, lecture in adaptive IIR filters, Munich.
1991	Motorola DSP-Seminar, Lecture in adaptive echo cancellation, Munich.
1991	Lecture in Digital Signal Processing TH Darmstadt
1993	IBM Seminar Communication Technology Introduction in Random Variables and Random Processes
1989-1993	Consultant for Telenorma GmbH, Bosch Telecom, Frankfurt.
1995	Session chair at the IEEE ASSP Workshop on Applications of Signal Processing to Audio and Acoustics, New Paltz, NY.
1997	UCLA extension course on "Adaptive Filtering in Signal Processing and Communications"
1997	Talk at the research colloquium of BERG, Cornell University, "Rapid Prototyping for a Fixed Wireless Loop."

PROFESSIONAL ACTIVITIES

1998	Session chair at the Asilomar conference on signals, systems and computers, Monterey, CA.
1998	Talk at the research colloquium of BERG, Cornell University, "Modem Design for a High Data Rate Fixed Wireless Loop."
1999	Talk at the graduate colloquium of, TU Darmstadt, "Rapid Prototyping for a High Data Rate Local Wireless Loop."
2000	Talk at the Themadag in Mikrocentrum Eindhoven, "Hard- en software Co-Design in embedded realtime systemen."
2000	Talk at the research colloquium of BERG, Cornell University, "Optimal binary codes for training channel equalizers."
2000	Talk at the research colloquium at University of California, Los Angeles, "Signal Processing Trends in Wireless Systems."
2001	Talk at the research colloquium of BERG, Cornell University, "Signal Processing Trends in Wireless Systems."
2001	Talk at the research colloquium of the Forschungszentrum Telekommunikation Wien and at Infineon Technologies, "What makes Rapid Prototyping rapid?"
2001	Consulting member of the Forschungszentrum Telekommunikation Wien (ftw).
2003	Talk at the research colloquium of the Forschungszentrum Telekommunikation Wien, "CD-Laboratory: Design Methodology of Signal Processing Algorithms."
2003	Talk at the research colloquium of the ETHZ, "Rapid Prototyping: The Five-Ones Approach".
2003-2006	Associate editor for IEEE Transactions on Signal Processing.

PROFESSIONAL ACTIVITIES

2003	TPC member and session chair at ICC03, Anchorage.
2003	Member of technical commitee for Informationstagung Mikroelektronik, Vienna.
2003	Session chair at the Asilomar conference on signals, systems and computers, Monterey, CA.
2003	Talk at the research colloquium at University of California, Los Angeles, "Improving MIMO Transmission by Channel Structuring"
2004 -today	Associate editor for Journal of Applied Signal Processing (EURASIP), now Advances in Signal Processing.
2004	Member of technical commitee for ISSSE 2004, Linz.
2004	Member of Network of Excellence TARGET: Top Amplifier Research Group in a European Team.
2004	Organizing invited session chair for Chip Design methodologies at CCCCT 04 in Dallas, Texas.
2004	Co-chair and publication chair for Eusipco 2004, Vienna.
2004-2012	Elected member of the AdCom of the EURASIP society, responsible for workshop development and conferences.
2004	Participant of COST 290, Traffic and QoS Management in Wireless Multimedia Networks.
2004	Scientific Project Reviewer for the Academy of Finland
2004	Talk at Fachhochschule Wiesbaden/Ruesselsheim "The chip design crisis," Dec. 17. 2004.

PROFESSIONAL ACTIVITIES

2005-today	Associate editor and founding member for Journal of Embedded Systems.
2005	Board of governor for ftw, Vienna
2005	Member of the technical committee, ITG Workshop on Smart Antennas, Duisburg, Germany, April 4-5, 2005.
2005	TPC member ICASSP 2005, Philadelphia, USA.
2005	Talk at international seminar at ETHZ Zurich, "Quasi-Orthogonal Space Time codes: Approaching Optimality", June 24, 2005.
2005	Talk at international seminar at TUM Munich, "Challenges in Wireless Implementations", July 1, 2005.
2005	PC of 4th International Symposium on Image and Signal Processing and Analysis ISPA05, Zagreb, Croatia, September 15-17, 2005.
2005	PC of 2nd IEE/EURASIP Conference on DSPenabled Radio Key note speaker, "Rapid Prototyping in Wireless System Design" Southhampton, September 18-20, 2005.
2005	Invited Talk at Österreichische Computer Gesellschaft und OVE, Graz "The Chip Design Crisis," October 14, 2005.
2005	PC of 5th International Conference on Technology and Automation ICTA'05, Thessaloniki, Greece, October 15-16, 2005.
2006	Talk at hardware-software codesign seminar/ Institut für Technische Informatik, "The Chip Design Crisis", May 2006.
2006	TPC member of EURASIP Conference 06 in Florence, TPC member of ICT06, Intern. Conference on Telecommunications, UK.
2006	Talk at international seminar at TU Munich "Rapid Prototyping in Wireless System Design", June 30, 2006.

PROFESSIONAL ACTIVITIES

2006 Talk at TU Hannover and MIMOon in Duisburg
"Testbeds and Rapid Prototyping in Wireless System Design,"
Dec. 19+20, 2006.

2006 Scientific Project Reviewer for Ministry of Science, Education and Sports of the Republic of Croatia.

2007 Chair of the International ITG/IEEE Workshop for Smart Antennas (WSA), Vienna, February 2007.

2007 Member of the Advisory Board for MimoOn, Duisburg, Germany.

2007 Talk at hardware-software codesign seminar/ Institut für Technische Informatik, "The Chip Design Crisis", May 2007.

2007 Talk at international seminar at TU Munich
"Error resilient methods in wireless systems," June 22, 2007.

2007 6th EURASIP Conference on Speech and Image Processing, Multimedia Communications and Services, Key note speaker,
"Error resilient methods in wireless systems," June 27, 2007.

2007 Chair of the 1st International EURASIP Workshop for RFID Technology Vienna, September 2007.

2007 TPC member of IEEE International Workshop on Cross Layer Design (IWCLD 2007), September 20-21, 2007, Jinan, Shandong, China
TPC Member of 1st ACM Workshop on Mobile Video in conjunction with ACM Multimedia, Augsburg, Germany, September 28, 2007.
TPC member of IEEE Globecom 2007.
TPC member of EURASIP Conference 07 in Poznan, Poland, Sept. 2007 and responsible for student paper contest.
TPC member of the 5th Int'l Symposium on Image and Signal Processing and Analysis (ISPA 2007), Istanbul , Turkey, September 27-29, 2007.
TPC member of the IEEE Int'l Conference on Signal Processing and Communications, (ICSPC07), Dubai, UAE, Nov. 24-17, 2007.
TPC member DASIP, France, November 2007.

PROFESSIONAL ACTIVITIES

2007-today	Scientific Project Reviewer for DFG (Deutsche Forschungsgemeinschaft)
2007	Key note speech at COST 290, Vienna "Error resilient methods in wireless systems," Oct. 1, 2007.
2007	Talk at Oulu University, Finland "Testbeds and Rapid Prototyping in Wireless Systems," Nov. 20, 2007.
2007	Talk at Fachochschule Ruesselsheim, Germany "Testbeds and Rapid Prototyping in Wireless Systems," Dec. 18, 2007.
2008	TPC member WSA, Darmstadt, Germany, February 2008. TPC member of 3rd IEEE International Symposium on Communications, Control and Signal Processing, Malta, March 2008. Organisational Committee, European Liason for IEEE ICASSP, Las Vegas, USA, April 2008. TPC member of ICC08, Bejing, China, May 2008. TPC member of International Symposium on Wireless Pervasive Computing, Santorini, Greece 7-9 May 2008 TPC member and special session organizer at CSNDSP, Graz, July 25-27, 2008.
2008	IWSSIP, Bratislava, 25-28. June 2008 Key note speaker, "Measurements of MIMO HSDPA and WiMAX transmissions"
2008	Co-chair of the Second International EURASIP Workshop on RFID Technology 7-8 July, 2008, Budapest, Hungary.
2008-2012	Re-elected AdCom Member of EURASIP
2008	50th International Symposium ELMAR-2008, Zadar, Croatia Key note speaker, "Testbeds and Rapid Prototyping in Wireless Systems" 10-13. September 2008.
2008	ITG Tagung, Vienna, 3. October 2008 "Testbedding" a comparison of WiMAX and HSDPA Performance.

PROFESSIONAL ACTIVITIES

2008	Universidad Polytechnica de Madrid, 6. October 2008 "Heuristic Optimisation Methods for System Partitioning in HW/SW Co-Design"
2009-2010	President of EURASIP Society
2009-2011	Executive panel member for Science Foundation Ireland
2009	TPC member of Workshop for Smart Antennas (WSA), Dresden, Feb. 2009.
2009	Member of the organization commitee for IWSSIP 2009, Chalkia, Greece, June 2009.
2009	TPC member of 2nd Int'l Workshop on Cross-layer Design (IWCLD) 2009 Palma de Mallorca, Spain, June 11-12, 2009.
2009	Talk at international seminar at TU Munich "Water filling: Is it really worth the effort?" June 25, 2009.
2009	TPC member of 16th International Conference on Digital Signal Processing (DSP 2009), Santorini, Greece, July 5-7, 2009.
2009	Talk at Peter Grant Workshop, Edinburgh, Scotland, Aug. 23, "The Shannon limit in mobile cellular systems: How far off are we?"
2009	TPC member of EURASIP Conference 09 in Glasgow, Scotland, Aug. 24-28, 2009.
2009	Talk at Uni Hanover: "Water Filling is it really worth the effort?" Hanover, Germany, August 31, 2009.
2009	Progamme Committee of the 6th Int'l Symposium on Image and Signal Processing and Analysis (ISPA 2009), Salzburg, Austria, September 16-18, 2009.
2009	Talk at WIT Workshop: "Communications Engineering and Gender Issues" Vienna, Austria, 21. September 2009
2009	Talk at SISE Workshop: "Project Part 9: Past, Now and Future" Vienna, Austria, 22. September 2009

PROFESSIONAL ACTIVITIES

2009 Talk at Cairo University, Egypt, 18. November 2009
"The Shannon limit in mobile cellular systems: How far off are we?"

2009 Talk at Bratislava University of Technology, Slovakia, 3. December 2009
"The Shannon limit in mobile cellular systems: How far off are we?"

2010 TPC member of ISCCSP in Limasool, Cyprus, March 2010

2010 TPC member Radioelektronika 2010, Brno, Czech Republic, 17-19. April 2010.

2010 Plenary Talk at Radioelektronika 2010, Brno, Czech Republic
"The Shannon limit in mobile cellular systems: How far off are we?"
17-19 April 2010.

2010 Member of the organization committee for IWSSIP 2010
Rio de Janeiro, Brazil, June 17-19, 2010.

2010 Reviewer for Czech Science Foundation, July 2010.

2010 TPC member of EUSIPCO 2010, Aalborg, Denmark, August 2010.

2010 Co-chair of 3rd International EURASIP Workshop on RFID Technology
La Manga del Mar Menor, Cartagena, Spain, 6-7 September 2010.

2010 Talk at Universidad de Coruna, Spain
"The Shannon limit in mobile cellular systems: How far off are we?"
10. September 2010.

2010 Talk at University College Dublin, Ireland
"The Shannon limit in mobile cellular systems: How far off are we?"
12. October 2010.

2010 Reviewer for DFG excellence initiative in Germany
2-3. November 2010.

PROFESSIONAL ACTIVITIES

2011 Co-chair of 17th European Wireless 2011
Vienna Austria, April 27-29, 2011.
TPC member EUSIPCO 2011, Barcelona, 2011.

2011 Talk at University Udine, Italy
"The Shannon limit in mobile cellular systems: How far off are we?"
8. May 2011.

2011 Talk at international Seminar, Vienna
"Design of Robust Equalizers"
6.June 2011.

2011 Reviewer for Czech Science Foundation, Prague
April and September 2011.

2011 Talk at Universidad Politecnica de Madrid.
"The performance of 3G and 4G cellular systems"
20. September 2011.

2011 Talk at Universidad A Coruna
"Design of Robust Equalizers", 23. September 2011.

2011 Research Stay at Universidad A Coruna
Short course on Image and Video compression
8.9-30.9, 2011.

2011 Future of Wireless Access Workshop, Southampton University
"The performance of 3G and 4G cellular systems"
31. October 2011.

2011 Reviewer for DFG excellence initiative in Germany
23-25. November 2011.

2011 Seminar Talk at Universite Paris-Sud.
"The performance of 3G and 4G cellular systems"
14. December 2011.

PROFESSIONAL ACTIVITIES

2011 Organization of "Elektrotechnik-day" at an elementary school

2012 Talk at the Joint Seminar with TU Brno and TU Bratislava.
"Tutorial on Wireless Sensor Nodes", Vienna, March 1, 2012.

2012 Chair of 19th International Conference on Signals,
Systems and Image Processing, IWSSIP 2012
Vienna, Austria, 11-13. April 2012

2012 Talk at the international Seminar with TU Munich and ETHZ.
"Signal Processing in RFID", Vienna, June 8, 2012.

2012 Coocon Seminar Series Talk at TH Darmstadt.
"The performance of 3G and 4G cellular systems", July 4, 2012.

2012 Seminar Talk at University Duisburg.
"Signal Processing in RFID", July 5, 2012.

2012 SISE II Workshop Talk
"On the learning behavior of WSNs," Sept. 6, 2012.

2012 Research Stay at Universidad A Coruna
Short course on Deterministic Signal Processing
9.9-26.9, 2012.

2012 Seminar Talk at Universidad Vigo, Spain.
"The performance of 3G and 4G cellular systems",
Sept. 20, 2012.

2012 Cochair of the 4th EURASIP RFID Workshop,
Turino, Italy, 27-28.9. 2012

2012 Seminar Talk at EPFL, Lausanne.
"The performance of 3G and 4G cellular systems",
Oct. 26, 2012.

PROFESSIONAL ACTIVITIES

2012	TPC member of European Wireless in Poznan, 18-20 April 2012 TPC member of ISCCSP in Rome, 2-4 May 2012 TPC member of Int. workshop on cognitive information processing, CIP 2012, Spain, 28-30 May 2012 TPC member ICC 2012, Ottawa, Canada, 10-15. June 2012 TPC member EUSIPCO 2012, Bucarest, August 2012. TPC member BIHTEL 2012, Sarajevo, October 25-27, 2012
2012	Reviewer for Czech Science Foundation, Prague, July 2012
2012	Plenary session chairman for EUSIPCO 2012, Bucarest, Special session on low latency, August 2012.
2012-2019	Member of Advisory Board for SIX Center, TU Brno
2013	Reviewer and Chair of Panel for Finish Science Foundation, Helsinki, Jan. 2013
2013	Invited plenary at WICOMT Workshop, Brno, CZ, May 22nd. Upcoming Challenges in Cellular Mobile Communications
2013	Chair of ICC Workshop on Beyond LTE-A, Budapest, June, 2013
2013	Invited Industry Panel at ICC 2013, Budapest, June 2013.
2013	Invited plenary at Comonsens Workshop, Vigo, Spain, July 3rd. Upcoming Challenges in Cellular Mobile Communications
2013	External reviewer for Comonsens Project, Spain.
2013	HSDPA-WiMAX-LTE The Performance of 3G and 4G Cellular Systems Talk at Nato Meeting, A Coruna, Spain, 9.July 2013.

PROFESSIONAL ACTIVITIES

2013-2019 Member of Managing Board of the SIX Research Center at TU Brno.

2013 TPC member WSA 2013, Stuttgart, March 2013.
TPC member ICASSP 2013, Vancouver, CA, May 2013.
TPC member SPAWC 2013, Darmstadt, June 2013.
TPC member of DSP 2013, Santorini, July 2013.
TPC member of IWSSIP 2013, Bucarest, Romania, July 2013.
TPC member of ISWCS 2013, Illemnau, August 2013.
TPC member EUSIPCO 2013, Marakech, September 2013.

2014 TPC member of ISCCSP in Thessaloniki, 21-23 May 2014
Special session organizer, "Feedback in Wireless Communications".

2014 Special session organizer at SAM 2014, A Coruna, Spain, June 2014.
Experimental Evaluation in Wireless Communications

2014 CoChair of NEWCOM Emerging Topic Workshop,
Vienna, 27-28. Oct. 2014.

2014 TPC member of WSA 2014, Erlangen, Germany, March 2014.
TPC member of 24th Radioelektronika, Bratislava, Slovakia, April 2014.
TPC member of ICASSP, Florence, Italy, May 2014.
TPC member of European Wireless, Barcelona, Spain, May 2014.
TPC member of IWSSIP 2014, Dubrovnik, Croatia, May 2014.
TPC member of ITS, Sao Paulo, Brazil, August, 2014.
TPC member of DSP, Hong Kong, August, 2014.
TPC member of EUSIPCO, Lisboa, Portugal, Sept. 2014.
TPC member of BihTel, X International Symposium on Telecommunications
Sarajevo, October 2014.
TPC member of Humusoft'14, Technical Computing Bratislava, Nov. 2014.

PROFESSIONAL ACTIVITIES

2015 TPC member of the Workshop on Smart Antennas (WSA'2015),
Ilmenau, Germany, March 2015.
TPC member of 25th Radioelektronika, Pardubice, Czech Republic, April 2015.
TPC member of the European Conference on Networks and Communications
(EuCNC'15), Paris, June 2015.
TPC member of the 2015 European Conference on
Networks and Communications, Paris, France, 29 June - 2 July 2015.
TPC member of DSP, Singapore, August, 2015.
TPC member of IWSSIP 2015, London, Sept. 2015.
TPC member of the 7th International Congress on Ultra Modern
Telecommunications and Control Systems (ICUMT 2015),
Brno, Czech Republic, Oct. 2015.

2015 Invited plenary talk at the International Scientific Conference on Information,
Communication and Energy Systems and Technologies ICEST,
Sofia, Bulgaria, June 24, 2015
"High Mobility Users in Future Cellular Networks"

2015 Invited plenary talk at Elmar 2015, Croatia, September 2015
"High Mobility Users in Future Cellular Networks"

2015 Invited seminar talk at Swisscom headquarters, Bern, Oct. 2015
"High Mobility Users in Future Cellular Networks"

2015 Invited seminar talk at EPFL Lausanne, Oct. 2015
"High Mobility Users in Future Cellular Networks"

2015 Cochair of the 5th EURASIP RFID Workshop,
Rosenheim, Germany, 22-23.10. 2015

2016 Invited seminar talk at Seminar TU Brno:
How to achieve Research Excellence, February 12, 2016.

2016 Track-Cochair of Nonlinear signal processing and adaptive filters
in the European Signal Processing Conference (EUSIPCO),
Budapest 29.8-2.9, 2016.

PROFESSIONAL ACTIVITIES

2016 TPC member of the Workshop on Smart Antennas (WSA'2016), Munich, Germany, March 2016.
TPC member of 26th Radioelektronika, Kosice, Slovakia, April 2016.
TPC member of IWSSIP 2016, Bratislava, Slovakia, June 2016.
TPC member of ICUMT 2016, Portugal, June 2016
TPC member of TSP Workshop, Vienna, June 2016

2016 Reviewer for the Slovenian Research Agency.
Reviewer for the Fonds National de la Recherche, Luxembourg.

2016 Invited seminar talk at A Coruna University, Spain, Sept. 2016
Future Cellular Networks for a Society in Motion

2017 TPC member of IWSSIP 2017, Poznan, Poland, May 2017.
TPC member of EUSIPCO, Kos, Sept. 2017

2017 Special Session Organizer at EUSIPCO 17
Signal Processing Challenges in 5G Mobile Communications
with Stefan Schwarz, Greece, Sept. 2017

2017 Reviewer for the Slovenian Research Agency.
Member of the Review Panel for the Fonds National de la Recherche
Luxembourg, 13. Sept. 2017.

2018 Cochair of the 6th EURASIP RFID Workshop,
Brno, Czech Republic, 11-12.9.2018

2018 Cochair of special session at EUSIPCO 18
System Level Optimization and Evaluation of 5G
and Beyond Mobile Communications
with Stefan Schwarz and Martin Mueller, Rome, Aug. 2018

2018 TPC member of the Workshop on Smart Antennas (WSA'2018), Munich, Germany, March 2018.
TPC member of 28th Radioelektronika, Kosice, Slovakia, April 2018.
TPC member of ICAASP 2018, Calgary, April 2018.
TPC member of IWSSIP 2018, Maribor, Slovenia, June 2018.
TPC member of EUSIPCO 2018, Rome, Sep. 2018.

2018 Principal Reviewer for the Slovenian Research Agency.
Member of the Review Panel for the Fonds National de la Recherche
Luxembourg, 13. Sept. 2018.

2018 Invited seminar talk at Sofia, Bulgaria, May 2018
Dramatic Changes Call for new Wireless Strategies

2018 Invited seminar talk at A Coruna University, Spain, Sep. 2018
Dramatic Changes Call for new Wireless Strategies

2019 Principal Reviewer for the Slovenian Research Agency.
Member of the Review Panel for the Fonds National de la Recherche
Luxembourg, 12-13. Sep. 2019.

2019 Plenary chair for the European Signal Processing Conference
(EUSIPCO), A Coruna, Spain, Sep. 2019.

2019 Special Session on Prototyping and Experimentation of Wireless
Communications Workshop (SPAWC), Cannes, France, July 2019.

2019-2020 Member of IEEE Signal Processing Society Technical Directions Board

2019 Lead Guest Editor of IEEE Access Special Issue
5G and Beyond Mobile Wireless Communications
Enabling Intelligent Mobility
jointly with Ke Guan, Thomas Kuerner, Cesar Briso, David Matolak,
Jun-ichi Takada, Wei Wang and Robert Heath.

2019 Invited seminar talk at Sofia, Bulgaria, Sep. 2019
Wireless Comunications of the Future

2019 TPC member of the Workshop on Smart Antennas (WSA'2019),
Wien, Austria, April 2019.
TPC member of ICAASP 2019, Brighton, May 2019.
TPC member of IWSSIP 2019, Osijek, Croatia, June 2019.
TPC member of EUSIPCO 2019, A Coruna, Spain, Aug. 2019.
TPC member of RFID 2019, Split, Croatia, June 2019.
TPC member of SPAWC 2019, Cannes, France, July 2019.
TPC member of TSP 2019, Budapest, Hungary, July 2019.

2020 Invited seminar talk at TU Dresden, 13 Jan. 2020
Wireless Communications of the Future

2020 Invited plenary talk at ITSRC conference, Bratislava, 22 April 2020
Wireless Communications of the Future

2020 Technical Chair of ICASSP, Barcelona, 4-9 May, 2020

2020 Invited plenary talk at SST conference, Osjiek, Croatia , 15. Oct. 2020
Wireless Comunications of the Future

2020 Panel discussion at IEEE Progress Conference, 26-27 Oct. 2020

2020 Principal Reviewer for the Slovenian Research Agency.
Member of the Review Panel for the Fonds National de la Recherche
Luxembourg, Sep. 2020.

2020 TPC member of the Workshop on Smart Antennas (WSA'2020),
Hamburg, Germany, Feb. 2020.
TPC member of SPAWC 2020, Atlanta, USA, May 2020.
TPC member of ICAASP 2020, Barcelona, May 2020.
TPC member of IWSSIP 2020, Rio de Janeiro, Brazil, July 2020.
TPC member of EUSIPCO 2020, Amsterdam, The Netherlands, Jan. 2021.

2021 Principal Reviewer for the Slovenian Research Agency.
Member of the Review Panel for the Fonds National de la Recherche
Luxembourg, Sep. 2021.

2021 TPC member of VTC Spring, Helsinki, 2021.
TPC member of ICAASP 2021, Toronto, June 2021.
TPC member of IWSSIP 2021, Bratislava, Slovakia, June 2021.
TPC member of IEEE Statistical Signal Processing Workshop, Rio de Janeiro, July 2021.
TPC member of the Workshop on Smart Antennas (WSA'2021),
French Riviera, France, Nov. 2021.
TPC member of the Asilomar conference, Nov. 2021.

2021 Invited talk "6G Wireless for Smart Trains",
Webinar on Enabling Technologies and Requirements
for Future Rail Transport Vertical.
Bejing, China, July 2021.
Invited talk "6G Wireless for Smart Trains",
Telecommunications Forum, Vienna, Nov. 2021.

2022 TPC member of IWSSIP, Bulgaria, June 2022.
TPC member of TSP 22,

2022 Invited Talk "5G+1=6G?" at international Seminar,
Munich, 24. June 2022.

2022 Principal Reviewer for the Slovenian Research Agency.
Member of the Review Panel for the Fonds National de la Recherche
Luxembourg, Sep. 2022.

2022 Guest Editor of IEEE Communications Magazine,
THz Channel Modelling
jointly with Ke Guan, Thomas Kuerner, Mazier Nekove.

2023 TPC member of WSA 23,
TPC member of IWSSIP 23,

2023 Invited Talk "5G+1=6G?" at Holotwin workshop,
Sofia, Bulgaria, 17. May 2023.

VOLUNTARY ACTIVITIES

1991-present	Reviewer for IEEE Transactions on Signal Processing
1992-present	Reviewer for IEEE Circuits and Systems
1994-present	Reviewer for IEE Proceedings
1994-present	Reviewer for Int. J. of Adaptive Control and Signal Processing
1994-present	Reviewer for Signal Processing (Europe)
1994-present	Reviewer for IEEE Signal Processing Letters
1995-present	Reviewer for IEEE Transaction on Neural Networks
1996-present	Reviewer for IEEE Transactions on Automatic Control
1997-present	Reviewer for IEEE Journal on Selected Areas in Communication
2000	Reviewer for Systems, Cybernetics and Informatics 2000, Globecom 2000.
2002-present	Reviewer for AEÜ
2002	Reviewer for EUSIPCO2002, Reviewer and TPC Member ICC03
2002-present	Reviewer for Electrical Engineering/Archiv for Elektrotechnik
2002-present	Reviewer for IEEE Transactions on Wireless Communications
2003-2005	Associate Editor for IEEE Transaction on Signal Processing
2003	Reviewer for ICC2004
2004-2018	Associate Editor for EURASIP JASP, Journal of Applied Signal Processing Algorithms
2004	Reviewer for ICASSP2005, ICC2005,EUSIPCO04
2005-2019	Associate Editor for EURASIP JES, Journal of Embedded Systems
2005	Reviewer for ICTA05,ISPA05, DSPenabled Radio Workshop, Austrochip05,EUSIPCO05
2006	Reviewer for VTC06, EUSIPCO06, ICC2007, Globecom06
2006-present	Reviewer for IEEE Transactions on Control System Technologies
2007	Reviewer for WSA07, EUSIPCO07, ICC07, Globecom07, ISPA2007, ICSPC07, DASIP2007
2007-2009	Associate Editor for Hindawi Research Letters on Signal Processing
2007-present	Reviewer for IEEE Transactions on Very Large Scale Integration Systems
2008-present	Reviewer for IEEE Communications Letters
2008-present	Reviewer for IEEE Transactions on Information Theory
2008	Reviewer for ICC08, ISCCSP08, DASIP08, RFID08, WSA08, EUSIPCO08, CSNDSP08
2009	Reviewer for WSA09, IWCLD2009, IWSSIP09, DASIP09, ISPA09, EUSIPCO09

VOLUNTARY ACTIVITIES

2010	Reviewer for ICASSP'10, WSA'10, IWSSIP'10, EUSIPCO'10, CSNDSP'10,EW'10,ISCCSP'10,RFID'10.
2011	Reviewer for WSA'11, IWSSIP'11, EUSIPCO'11, Radioelektronika'11.
2012	Reviewer for WSA'12, CIP'12, EW'12, IWSSIP'12, EUSIPCO'12., ICC'12, RFID'12, BIHTEL'12.
2013	Reviewer for WSA'13, ICC'13, ICASSP'13, IWSSIP'13, EUSIPCO'13, BIHTEL'13, SPAWC13, DSP'13.
2014	Reviewer for WSA'14, ICC'14, ICASSP'14, IWSSIP'14, EUSIPCO'14, BIHTEL'14, DSP'14, ITS'14, EW'14, Radioelektronika'14, SAM'14.
2015	Reviewer for WSA'15, ICASSP'15, ICC'15, ISCAS'15, Radioelektronika'15
2016	Reviewer for WSA'16, ICASSP'16, ICC'16, Radioelektronika'16, CUMT16, EUSIPCO'16
2017	Reviewer for WSA'17, ICASSP'17, ICC'17, Radioelektronika'17, IWSSIP17, EUSIPCO'17
2018	Reviewer for ICASSP'18, EUSIPCO'18, WSA'18,IWSSIP'18 Radioelektronika'18
2019	Reviewer for ICASSP'19, EUSIPCO'19, WSA'19,IWSSIP'19 RFID'19,SPAWC'19,TSP'19.
2020	Reviewer for ICASSP'20, EUSIPCO'20, WSA'20,IWSSIP'20 SPAWC'20
2021	Reviewer for ICASSP'21, Asilomar 21, IWSSIP21,WSA21 SSP21,EUSIPCO21
2022	Reviewer for Radioelektronika'22
2023	Reviewer for IWSSIP 2023

RESEARCH INTERESTS

- Algorithms for speech application, speech enhancement and recognition
- Adaptive filters, echo compensation, active noise control
- Neuronal networks, classification algorithms, signal detection
- Robust $H_\infty-$control
- Algorithm in communications
- Adaptive equalizers, optimal receivers, controlled antennas
- Adaptive modulation and channel coding
- Automatic IC generation, optimizing C-compilers
- Rapid prototyping, synthesis tools
- Industrial methods for productization
- EDA tool integration
- Mobile communications
- Cross layer optimization
- Wireless video streaming and evaluation
- UMTS and LTE networks
- Localization algorithms
- Wireless traffic models
- Wireless MIMO transmission, Space-time coding
- Interference mitigation
- Cell capacity
- RFID technology

COURSES (All Master level)

2002-present	Wireless Communications
2002-present	Seminar in Wireless Communications
2002-2004, on demand	Stochastic Signal Processing
2002-2008	Industrial Chip Design
2002-2016	Adaptive Filters
2003-present	Deterministic Signal Processing
2004-present	International Seminar in Mobile Communications
2004-present	DSP Seminar (PhD)
2009-present	Multimedia Mobile Communications
2010-present	Image and Video Processing
2014-2019	5G Wireless Communications
2014-2017	Data Communications
2016-2019	Heterogeneous networks
2016-2019	reading group on stochastic geometry
2019-present	Machine Learning Algorithms

PROJECTS

Since the beginning of my position as University Professor at the TU Vienna, I dealt with various smaller projects jointly with industrial partners (Infineon, Seibersdorf research, Qinetiq, Kathrein, T-Mobile, Emerson) as well as research partners (ftw, NoE TARGET, COST). The volume of such cooperation varies and sums up to about 100.000 Euro per annum. Some larger projects are to be mentioned explicitly with more details:

1) In July 2002 I founded the Christian Doppler Lab (Design Methodologies of Signal Processing Algorithms) with the industrial partners Infineon Technologies and Seibersdorf research. The lab that I was heading since then had a run-time of seven years and ended regularly in June 2009. The content of this work is automatic chip design for very complex wireless systems (UMTS receivers, VDSL modems, etc.) and rapid prototyping for wireless systems. The annual funding is about 300.000Euro supporting five full time PhD students. The lab ended after a maximum possible duration of seven years on July 30, 2009. Part of ideas were carried on in a succeding CD Lab on "Wireless Technologies for Sustainable Mobility" led by Christoph Mecklenbräuker (2010-2016) and in a recent CD Lab on led "Wireless Technologies for a Society in Motion" by Dr. Stefan Schwarz.

2) Since December 2003 I am leading a research project with mobilkom Austria (mka, since 2010 A1 Telekom Austria)), with focus on UMTS networks. We focus on video streaming and its quality evaluation in the network, cross layer optimization, traffic modeling on various layers as well as localization algorithms. The project has been extended several times and continues with annual funding of 250.000 Euro, supporting four full-time PhD students and one Postdoctoral position. The cooperation is expected to continue for many more years to come. Also one module in a recent CD Lab on Wireless technologies for sustainable mobility led by Christoph Mecklenbräuker is supported by this project. The project is now the largest single firm project at the TU Vienna with an accumulated budget of more than 3Mio Euro!

3) In December 2007 a grant for a national research network (NFN) was achieved together with Dr. Thomas Zemen (ftw), Prof. Gernot Kubin (TU Graz), ao.Prof. Franz Hlawatsch (TU Wien), ao.Prof. Gerald Matz (TU Wien), Prof. Groechenig (Uni Wien) in the field of signal processing in engineering (SISE). This collaboration covers the expenses for one postdoc and one PhD student: 269.000 Euro for the first three years and 446.000 Euro over the extended period of another three years.

4) An interdisciplinary grant (jointly with Prof. U.Schmid) on Robust Embedded Systems over the amount of 2.010.000 Euro was accepted by the Austrian Government in 2008 in the context of Uniinfrastructure IV. I was assigned by the rectorate to manage the budget among the various groups involved.

5) Starting January 2010 the STREP-proposal LOLA was accepted in the 7th EU framework, jointly with EURECOM (R.Knopp) and Linköping Universitet (Erik G. Larsson) as well as several industrial partners. The goal is to identify and model delays in modern 4G networks and invent means to further decrease them. The anticipated budget for three years supporting one PhD and one postdoc is 387.000 Euro.

6) Starting 2009 the group developed simulators for investigating LTE performance. Over the years three simulators (LTE-A downlink link level, LTE uplink link level, LTE-A DL system level) were developed following the principles of reproducible research. Academic partners can obtain licenses for free, while companies have to pay fees. Until today we have more than a dozen industrial partners, that brought in $\sim$200.000 Euro.

7) 2014-2016 a contract with General Motors was signed to analyze eMBMS traffic in the context of vehicular M2M traffic. The annual volume is $\sim$80.000 Euro.

8) In Horizon 2020 we were successful with a Teaming proposal (Adwice) jointly with the TU Brno, to develop research and teaching at TU Brno, from May 2015-June 2016, 365.000 Euro.

9) 2017-2019, a grant from the Czech agency GACR was given (Markus Rupp, reg. no. 17-18675S) for the development of "Future transceiver tech-

niques for the society in motion," 6.245Mio Czech Crowns ∼250.000 Euro.

10) Starting 2017 the group developed simulators for investigating 5G performance. Over the years two simulators (5G link level, 5G system level) were developed following the principles of reproducible research. Academic partners can obtain licenses for free, while companies have to pay fees. Until today we have received ∼250.000 Euro.

11) Starting Dec 1,2020 (until Nov. 30 2024) Metawireless, EU project on Meta surfaces, 264.000 Euro.

Doctoral Theses (advised)

1. Thomas Zemen: "OFDM Multi-User Communication Over Time-Variant Channels";
   1. Reviewer: E. Bonek, 2. Reviewer: M.Rupp, 2004.

2. Joachim Wehinger: "Iterative Multi-User Receivers for CDMA Systems";
   1. Reviewer: M. Rupp, 2. Reviewer, E.Ström, Chalmers, Sweden, 2005.

3. Ernst Aschbacher "Digital Pre-distortion of Microwave Power Amplifiers";
   1. Reviewer: M.Rupp, 2. Reviewer: T. Laakso, HUT, Finland 2005.
   Award: Prize of Austrian Society for Information Technologies(GIT) 2006.

4. Biljana Badic: "VLSI Circuits for MIMO Communication Systems";
   Advisor: H.Weinrichter, 2. Advisor: M.Rupp, 1.Reviewer: H.Weinrichter, 2.Reviewer: M.Rupp, 2005.

5. Andreas P.Burg: "VLSI Circuits for MIMO Communication Systems";
   Advisor: W.Fichter, 2. Advisor: M. Rupp, 1.Reviewer: W.Fichtner, ETHZ, Swisse, 2.Reviewer: M.Rupp, Dec. 2005.

6. Pavle Belanovic: "An Open Tool Integration Environment for Efficient Design of Embedded Systems in Wireless Communications";
   1. Reviewer: M.Rupp, 2.Reviewer: A.Steininger, Feb. 2006.
   Award: Prize of Austrian Society for Measurement and Automation (OGMA) 2007.

7. Olivia Nemethova: "Error Resilient Transmission of Video Streaming over Wireless Mobile Networks";
   1. Reviewer: M.Rupp, 2.Reviewer: M.Kieffer, ENST, Paris, June 2007
   Award: Dr. Fehrer Preis 2007 (best applied doctoral thesis of TU Vienna)
   Award: Würdigungspreis des Bundesministerium für Wissenschaft und Forschung
   Award: Sub Auspiciis Promotion mit Bundespräsident Heinz Fischer
   Award: Prize of Austrian Society for Information Technologies(GIT) 2007.

8. Gottfried Lechner: "Efficient Decoding Techniques for LDPC Codes"; 1. Reviewer: M.Rupp, 2.Reviewer: R.Urbanke, EPFL, July 2007.

9. Naeem Zafar: "Energy Aware Frame Work for Mobile Computing"; 1.Reviewer: M.Rupp, 2.Reviewer: C.Grimm, Oct. 2007.

10. Wolfgang Karner: "Link Error Analysis and Modeling for Cross-Layer Design in UMTS Mobile Communication Networks"; 1. Reviewer: M.Rupp, 2.Reviewer, R. Verdone, Universita di Bologna, Italy, Dec. 2007.
Award: Prize of Austrian Society for Information Technologies(GIT) 2008.

11. Martin Holzer: "Design Space Exploration for the Development of Embedded Systems"; 1. Reviewer: M.Rupp, 2.Reviewer: A.Jantsch, KTH Sweden, April 2008.

12. Bastian Knerr: "Heuristic Optimisation Methods for System Partitioning in HW/SW Co-Design"; 1. Reviewer: M.Rupp, 2.Reviewer: C.Grimm, July 2008.

13. Michal Ries: "Video Quality Estimation for Mobile Video Streaming"; 1. Reviewer: M.Rupp, 2.Reviewer: Yevgeni Koucheryavy, TU Tampere, Oct. 2008.

14. Philip Svoboda: "Measurement and Modelling of Internet Traffic over 2.5 and 3G Cellular Core Networks"; 1. Reviewer: M.Rupp, 2.Reviewer: A.Kassler, Sweden, Dec. 2008.

15. Christian Mehlführer: "Measurement-based Performance Evaluation of WiMAX and HSDPA"; 1. Reviewer: M.Rupp, 2.Reviewer: Thomas Kaiser, Uni Hanover, Sept. 2009.

16. Sebastian Caban: "Testbed-based Evaluation of Mobile Communication Systems"; 1. Reviewer: M.Rupp, 2.Reviewer: Luis Castedo Ribas, Uni La Coruna, Sept. 2009.
Award: Würdigungspreis des Bundesministerium für Wissenschaft und Forschung
Award: Sub Auspiciis Promotion mit Bundespräsident Heinz Fischer

17. Martin Wrulich: "System-Level Modeling and Network Optimization for HSDPA Networks";
    1. Reviewer: M.Rupp, 2.Reviewer: B.Fleury, Aalborg, Oct. 2009.
    Award: Würdigungspreis des Bundesministerium für Wissenschaft und Forschung
    Award: Sub Auspiciis Promotion mit Bundespräsident Heinz Fischer

18. Mostafa E.A. Ibrahim: "Power Estimationand Optimization for Software-Oriented embedded Systems";
    Advisor: M.Rupp, 1. Reviewer: S. Habib, Cairo University, Egypt, 2.Reviewer: M.Rupp, Nov. 2009.

19. Luca Superiori: "Optimization of Video Streaming over 3G Networks";
    1. Reviewer: M.Rupp, 2.Reviewer: D.Giusto, Calgary University, Italy, April 2010.

20. Christoph Angerer: "Measurement-based Design and Exploration of Radio Frequency Identification Systems";
    1. Reviewer: M.Rupp, 2.Reviewer: R.Weigel, Techn. Universität Erlangen, Germany, August 2010.
    EURASIP Best PhD Award 2015

21. Jose Antonio Garcia Naya: "Testbed Design for Wireless Communications Systems Assessment";
    1. Reviewer: Luis Castedo Ribas, A Coruna University, Spain, 2. Reviewer: M.Rupp, September 2010.

22. Aamir Habib: "Antenna Selection for Compact Multiple Antenna Communication Systems";
    1. Reviewer: Markus Rupp, 2.Reviewer: Claude Oestges, Universite Catholique de Louvain, June 2012.

23. Qi Wang: "Performance Evaluation of Practical OFDM Systems with Imperfect Synchronization",
    1.Reviewer: Markus Rupp, 2. Reviewer: Marius Pisavento, TU Darmstadt, November 2012.

24. Josep Colom Ikuno: "System Level Modelling and Optimization of the LTE Downlink"
    1. Reviewer: Markus Rupp, 2. Reviewer: Prof. Kürner, TU Braunschweig, Germany, March 2013.

25. Michal Simko: "Pilot Pattern Optimization for Doubly-Selective MIMO OFDM Transmissions"
    1. Reviewer: Markus Rupp, 2. Reviewer: Paulo Diniz, Federal University Rio de Janeiro, May 2013. (**Inits award 2013**)

26. Ondrej Sluciak: "Convergence Analysis of Distributed Consensus Algorithms"
    1. Reviewer: Markus Rupp, 2. Reviewer: Wilfried Gansterer, Uni Wien, June 2013.

27. Markus Laner: "Analyzing Packet Delay in Reactive Networks,"
    1. Reviewer: Markus Rupp, 2. Reviewer: Raymond Knopp, Eurecom, October 2013.

28. Stefan Schwarz: "Limited Feedback Transceiver Design for Downlink MIMO OFDM Cellular Networks,"
    1. Reviewer: Markus Rupp, 2. Reviewer: Robert Heath, Austin, November 2013. (**Inits award 2014**)

29. Fabian Hausberg: "Adaptive und kennfeldbasierte Steuerung aktiver Motorlager,"
    Advisor: Manfred Pöchel, 2. Advisor: Markus Rupp, 1.Reviewer: Manfred Pöchel, 2.Reviewer: Markus Rupp, December 2014.

30. Martin Taranetz: "System Level Modeling and Evaluation of Heterogeneous Cellular Networks,"
    1. Reviewer: Markus Rupp, 2. Reviewer: Robert Heath, Austin, June 2015.

31. Jelena Kaitovic: "Collision Recovery Receivers for RFIDs,"
    Advisor: Markus RUpp, 1. Reviewer: Markus Rupp, 2. Reviewer: Javier Alonso Vales, Cartagena, Spain, December 2015.

32. Robert Dallinger: "Stability of Coupled Adaptive Filters,"
    Advisor: Markus Rupp, 1.Reviewer: Markus Rupp, 2. Reviewer: Vitor Nascimento, Sao Paulo, Brazil, January 2016.

33. Nicole Brosch: "Spatio-temporal Video Analysis for Semi-automatic 2D-to-3D Conversion,"
    Advisor: Margrit Gelautz, 2.Advisor: Markus Rupp, 1. Reviewer: Margrit Gelautz, 2. Reviewer: Markus Rupp, October 2016.

34. Geetha Ramachandran: "Elements of an Image Processing System: Navigating through Representation, Shape Matching and View Synthesis,"
    Advisor: Markus Rupp, 1. Reviewer: Vaclav Hlavac, TU Prague,
    2. Reviewer: Pavel Zemcik TU Brno, Dec. 2017.

35. Ronald Nissel: "Filter Bank Multicarrier Modulation for Future Wireless Systems "
    Advisor: Markus Rupp, 1. Reviewer: Maurice Bellanger, CNET,
    2. Reviewer: Stephan Weiss, Strathclyde, UK, Dec. 2017.

36. Martin Müller: "System Level Investigations for Mobile and Indoor Users in Future Cellular Networks"
    Advisor: Markus Rupp, 1. Reviewer: Marco Di Renzo, CNRS - CentraleSupelec - Univ Paris-Sud, 2. Reviewer: Luis Castedo Ribas, Universidad La Coruna, July 2018.

37. Erich Zöchmann, "On the Occurrence of Two-Wave with Diffuse Power Fading in MillimeterWave Communications,"
    Advisor: Markus Rupp, 1. Reviewer: Reiner Thomä, 2. Reviewer: Robert Heath, Austin State University, March 2019.

38. Fjolla Ademaj, "Spatial Consistency of 3D Channel Models,"
    Advisor: Markus Rupp, 1. Reviewer: Bernard Fleury, Aalborg University 2. Reviewer: Ke Guan, Bejing University Sep. 2019.

39. Samira Homayouni, "On Machine Learning-based Channel Feedback Reduction in 4G/5G Networks,"
    Advisor: Markus Rupp, 1. Reviewer: Roman Marsalek, TU Brno 2. Reviewer: Andrea Tonelli, University Klagenfurt, Sep. 2020.

40. Stefan Pratschner, "Separability of Closely Spaced Users in Massive MIMO Systems,"
    Advisor: Stefan Schwarz, 2. Advisor: Markus Rupp, 1. Reviewer: Florian Kaltenberger, 2. Reviewer: Katsuyuki Haneda, Aalto University, Feb. 2021.

41. Ljiljana Marijanovic, "Multiplexing Services in 5G New Radio: Optimal Resource Allocation based on Mixed Numerology and Mini-slot Approach"
    Advisor: Stefan Schwarz, 2. Advisor: Markus Rupp, 1.Reviewer: Jiri Blumenstein 2.Reviewer: Hysein Arslan, Feb. 2021.

42. Vaclav Raida, "Data-Driven Estimation of Spatiotemporal Performance Maps in Cellular Networks,"
    Advisor: Markus Rupp, 2.Advisor: Philipp Svoboda, 1 Reviewer: Roberto Verdone , 2.Reviewer: Vladimir Poulkov, Aug. 2021.

43. Bashar Tahir, "Towards Massive Connectivity via Uplink Code-Domain NOMA,"
    Advisor: Stefan Schwarz, 2.Advisor: Markus Rupp, 1.Reviewer: Dr. Yuanwei Liu, Queen Mary University of London, 2.Reviewer: Prof. Daniel Benevides da Costa, National Yunlin University of Science and Technology, April 2022.

44. Moses Kwasi Torkudzor, "Energy Efficient Scheduling in Machine-to-machine Communication over Cellular Networks,"
    Advisors: Jamal-Deen Abdulai, Godfrey A. Mills, Markus Rupp ,Robert A. Sowah, University of Ghana, March 2022.

Doctoral Theses (reviewed)

1. Maxime Guillaud,
   Advisor: Dirk Slock, Reviewer: M.Rupp, Eurecom, 2005.

2. Fernando Hugo Gregorio, HUT, Finland: "Analysis and compensation of nonlinear power amplifiers effects on multiantenna OFDM systems";
   Advisor: Risto Wichman, Helsinki University of Technology, Finland, 1.Opponent: M.Rupp, 2.Opponent: M.Valkama, Tampere University, Finland, Nov. 2007.

3. Gabriel Caffarena: "Combined Word-Length Allocation and High-Level Synthesis of Digital Signal Processing Circuits,"
   1.Reviewer: Carlos Carreras, UPM Madrid, 2. Reviewer: M.Rupp, Oct. 2008.

4. Carole Devlin: "Peak to Average Power Ratio Reduction and Pulse Shaping Techniques for OFDM Systems";
   1. Reviewer: T.Brazil, UCD Ireland, 2. Reviewer: M. Rupp, Feb. 2009.

5. Andreas Wilzeck: "A Software Defined Radio Approach for High Data-Rate Multi-Antenna Wireless Communications with Frequency Domain Processing";
   1. Reviewer: T.Kaiser, Uni Hanover, 2.Reviewer: M.Rupp, Sept. 2009.

6. Nesrine Changuel: "Quality-oriented control of video delivery over wireless channels";
   1. Reviewer: Michel Kieffer, Universite Paris Sud, 2. Reviewer: Bessem Sayadi, Alcatel-Lucent, 3. Reviewer: Markus Rupp, December 2011.

7. Helka-Liina Määttänen: "Linear transmission methods and feedback for downlink MIMO systems";
   Advisor: Olav Tirkonen, Aalto University, Opponent: Markus Rupp, June 2012.

8. Daniele Inserra, "Direction of Arrival Estimation for Radio Positioning: a Hardware Implementation Perspective,"
   Advisor: Andrea Tonello, University of Udine,It aly, Review: Markus Rupp, Dec. 2012.

9. Ladislav Polak: "Analysis and Simulation of the Signals Transmission in the DVB-H/SH Standards",
   1. Reviewer: Tomas Kratochvil, TU Brno, 2. Reviewer: Markus Rupp, May 2013.

10. Imran Latif: "Scalable system level evaluations for LTE using PHY abstraction,"
    Advisor: Floran Kaltenberger, Eurecom, Reviewers: Markus Rupp, Raphael Visoz, August 2013.

11. David Levy: "WLAN power save by header compression and packet overhearing reduction,"
    Advisor: Ivan Kotulik, Bratislava, 1. Reviewer: Martin Klimo, Zilinie, 2. Reviewer: Markus Rupp, August 2014.

12. Jose Rodriguez Pineiro: "Broadband Wireless Communication Systems for High Mobility Scenarios,"
    Luis Castedo, Universidade de A Coruna, Review: M.Rupp, Aug. 2016.

13. Elena Lukashova: "Interference-Aware Receivers for Single-User MIMO LTE Systems,"
    Advisor: Florian Kaltenberger, Eurecom, France, 2. Advisor: C. Bonnet, 1. Reviewer: Luc Deneire, 2.Review: Markus Rupp, May 2017.

14. Laiyemo Ayotunde Oluwaseun: "HIGH SPEED MOVING NETWORKS IN FUTURE WIRELESS SYSTEMS,"
    Advisor: Markuu Junti, Oulo, Finland, 1. Reviewer: M.Rupp, Dec. 2017.

15. Thomas Diminguez Bolano: "Design and Evaluation of New Waveforms for High Mobility Communications,"
    Advisor: Luis Casteda, Reviewer: Markus Rupp, July 2018.

16. Tim Ruegg: "Low Complexity Physical Layer Cooperation Concepts for Mobile Ad Hoc Networks,"
    Advisor: Armin Wittneben, ETHZ, Reviewer: M.Rupp, Aug. 2018.

17. Martin Fuhrwerk: "Channel Adaptive Waveforms with Homo- or Heterogeneous Configurations per Cell, An FBMC-OQAM based evaluation,"
    Advisor: Jürgen Peissig, University Hannover, Reviewer: Markus Rupp, Sep. 2018.

18. Roman Alieiev: "Predictive Vehicular Communications Using Automotive Sensor Data,"
    Advisor: Thomas Kürner, TU Braunschweig, 1.Reviewer: T. Kürner, 2. Reviewer: M.Rupp, May 2021.

19. Christoph Motz: "Statistics Aided Self-Interference Cancellation for LTE-A/5G Transceivers,"
    Advisor: Mario Huemer, JK University, Linz, Austria, 1. Reviewer: M. Huemer, 2. Reviewer: Markus Rupp, Oct. 2021.

Bachelor and Diploma Theses

1. M. Allram: "System Verification of UMTS Baseband Functions with High Level Models"; Supervisor: M. Rupp, 2003.

2. P. Stipek: "On the Channel Influence when Utilizing Multiple Antenna Transmission"; Supervisor: M. Rupp, 2003.

3. C. Mehlführer: "Implementation and Real-Time Testing of Space-Time Block Codes"; Supervisor: B. Badic, M. Rupp, 2004. **Award:** Vodafone prize 2006.

4. G. Maier: "Prototypen-Entwicklungsumgebung zur schnellen Simulation von DSP-Algorithmen"; Supervisor: M. Rupp, M. Huemer, 2004.

5. J.C. Rodriguez: "Improved error detection in H.264 encoded video stream for mobile networks"; Supervisor: O. Nemethova, M. Rupp, 2004.

6. M. Steinmair: "Identifikation und Linearisierung nichtlinearer Leistungsverstärker mit Volterrareihen"; Supervisor: E. Aschbacher, M. Rupp, 2004.

7. A. Al Moghrabi: "Error concealment methods for video transmission over wireless networks"; Supervisor: O. Nemethova, M. Rupp, March 2005.

8. E. Dijort Romagosa: "Netmeeting: Performance and optimisation for UMTS network"; Supervisor: O. Nemethova, M. Rupp, March 2005.

9. S. Caban: "Development and Setting Up of a 4x4 Real-Time MIMO Testbed"; Supervisor: E. Aschbacher, M. Rupp, June 2005.
   Award: Vodafone prize 2006.

10. S. Geirhofer: "Design and Real-Time Measurement of Equalization Schemes for HSDPA"; Supervisor: C. Mehlführer, M. Rupp, June 2005.
    Award: City Vienna 2005.

11. C. Angerer: "Testbed Implementation for a Low Density Parity Check Decoder"; Supervisor: G. Lechner, M. Rupp, June 2005.

12. G. Brandmayr: "Automated Rapid Prototyping Environment for Field Programmable Gate Arrays"; Supervisor: M. Rupp, G. Humer, T. Müller-Wipperfürth, July 2005.
    Award: Prize of Austrian Society for Information Technologies(GIT) 2005.

13. P. Brunmayr: "Implementation of a Nonlinear Digital Pre-distortion Algorithm"; Supervisor: E. Aschbacher, M. Rupp, July 2005.

14. B. Lopez Garcia: "Segmentation of sport video sequences"; Supervisor: O. Nemethova, M. Rupp, Oct. 2005.

15. T. Tebaldi: "Influence of Audio and Video Quality on subjective Audiovisual Quality - MPEG-4 and AAC coding"; Supervisor: M. Ries, M. Rupp, Oct. 2005.

16. R.Puglia: "Influence of Audio and Video Quality on subjective Audiovisual Quality - H.263 and Adaptive Multi Rate (AMR) coding"; Supervisor: M. Ries, M. Rupp, Oct. 2005.

17. Alexander Paier: "Berechnung und Optimierung der UMTS Netzabdeckung innerhalb von Gebäuden"; Supervisor: W. Karner, M. Rupp, March 2006.

18. M. Zavodsky: "Time-Variant Video Quality Evaluation for Mobile Networks"; Supervisor: O. Nemethova, M. Rupp, May 2006.

19. C.T. Castella: "RLC based distortion model for H.264 video streaming"; Supervisor: O. Nemethova, C. Weidmann, M. Rupp, June 2006.

20. Marek Braun: "Video streaming test bed for UMTS network"; Supervisor: M. Ries, M. Rupp, June 2006.

21. G.C. Forte: "Robust error detection for H264/AVC using relation based fragile watermarking"; Supervisor: O. Nemethova, M. Rupp, Nov. 2006.

22. Antiza Dancheva: "Video Quality Evaluation"; Supervisor: M. Ries, M. Rupp, March 2007.

23. Amalie Roca: "Implementation of a WiMAX simulator in Simulink" Supervisor: C. Mehlführer, M. Rupp, March 2007.

24. Ignacio Cort Todoli: "Performance of Error Concealment Methods for Wireless Video" Supervisor: O. Nemethova, M. Rupp, June 2007.

25. Catalina Crespi de Arriba: "Subjective Video Quality Evaluation and Estimation for H.264 Codec and QVGA Resolution Sequences" Supervisor: M. Ries, M. Rupp, June 2007.

26. Iria Rodriguez Losanda: "QoS Estimation during Session Initiation of Video Streaming Session" Supervisor: M. Ries, P. Reichl, M. Rupp, Sept. 2007.

27. Mariona Salvat: "Application of SP and SI frames in wireless multimedia communication" Supervisor: L. Superiori, M. Rupp, Sept. 2007.

28. Elena Recas de Buen: (Bacc.) "Test bed design for interactive video conference services"; Supervisor: M. Ries, M. Rupp, Sept. 2007.

29. Jan Gero: "Performance Evaluation of Mobile Video Delivery Technologies"; Supervisor: M. Ries, M. Rupp, Nov. 2007.

30. Robert Dallinger: "Pre-distortion Algorithms for Power Amplifiers"; Supervisor: S. Caban, M. Rupp, Nov. 2007.

31. Josep Colom Ikuno: "Performance of an Error Detection Mechanism for Damaged H. 264/AVC Sequences"; Supervisors: L. Superiori, M. Rupp, Jan. 2008.

32. Manfred Bürger: "Forecasting of Traffic Load in a Live 3G Packet Switsched Core Network"; Supervisors: P. Svoboda, M. Rupp, March. 2008.

33. Alfredo Font Perez: "Encoding Optimization of H.264/AVC Soccer Video Sequences"; Supervisors: L. Superiori, M. Rupp, Aug. 2008.

34. Eva Rodriguez Rodriguez: "Robust Error Detection Methods for H.264/AVC Videos"; Supervisors: L. Superiori, O. Nemethova, M. Rupp, Sep. 2008.

35. Jakob Rieckh: "Scalable Video for Peer-to-Peer Streaming"; Supervisors: L. Superiori, M. Rupp, Sep. 2008.

36. Juan Tajahuerce Sanz: "Application if SI frames for H.264/AVC Video Streaming over UMTS Networks"; Supervisors: L. Superiori, M. Rupp, Oct. 2008.

37. Borja Fananas Mata: "Investigation of HSDPA Schedulers"; Supervisors: M. Wrulich, M. Rupp, Oct. 2008.

38. Maria Elsa Feliz Fernandez: "HSDPA CQI Mapping Optimization Based on Real Network Layouts"; Supervisors: M. Wrulich, M. Rupp, Oct. 2008.

39. Dagmar Bosanska: "Channel Adaptive OFDM Systems with Quantized Feedback," Supervisors: C. Mehlführer, M. Rupp, Nov. 2008.
Award: Prize of Austrian Society for Information Technologies(GIT) 2009.

40. Krishnakumar Radhakrishnan: "Implementation of a Soft Output Sphere Decoder by Rapid Prototyping Methodology," Supervisors: C. Mehlführer, M. Rupp, Nov. 2008.

41. Andreu Mateu Torrello: "CPICH Power Optimization for MIMO HSDPA," Supervisors: M. Wrulich, M. Rupp, April 2009.

42. Carlos Fons Cuesta: "Development of Receiver Algorithms for Radio Frequency Identification (RFID)," Supervisors: C. Angerer, M. Rupp, April 2009.

43. Michal Simko: "Channel Estimation for UMTS Long Term Evolution," Supervisors: C. Mehlführer, M. Wrulich, M. Rupp, April 2009.

44. Markus Laner: "Evaluation and Modeling of Power Control Information in a 3G Cellular Mobile Network," Supervisors: P. Svoboda, M. Rupp, October 2009.
Award: INITS Award 2010.

45. Jose Luis Asensio Aragon: "Cross-layer optimizations for multimedia services over mobile networks," Supervisors: L. Superiori, M. Wrulich, M. Rupp, Jan. 2010.

46. Henri Ruotsalainen: "Investigation of orthogonal basis expansions for adaptive Wiener models," Supervisors: R. Dallinger, M. Rupp, March 2010.

47. Sara Martínez Garcia: "Distortion Model for H.264/AVC Sequences," Supervisors: L. Superiori, M. Rupp, April 2010.

48. Mar Pascual Trigos: "Master in Science in Telecommunication Engineering & Management," Supervisors: P.Svoboda, M.Rupp, April 2010.

49. Nieves Padilla: "Perceived Quality of Massive Multiplayer Online Games in Mobile Environments," Supervisors: M.Ries, P.Svoboda, M.Rupp, April 2010.

50. Oscar Golderos Blanco: "Delay Impacts On Human-To-Human Mediated Interaction And End-User Quality Perception," Supervisors: M. Rupp, S. Egger, April 2010.

51. Armin Disslbacher-Fink: "Hardware based Timing Synchronization," Supervisors: S.Caban, M.Rupp, January 2011.

52. Martin Taranetz: "Constrained Capacity Density Optimization by Fractional Frequency Partitioning," Supervisors: J.C.Ikuno, M.Rupp, March 2011.

53. Jose Carlos Vieira: "Implementation of LTE Mini receiver on GPUs," Supervisors: M.Simko, M.Rupp, April 2011.

54. Elena Recas de Buen: "Security Aspects on the Signaling and Data-Plane in 2G/3G Networks," Supervisors: P.Svoboda, M.Rupp, November 2011.

55. Erin Huremovic: "Wireless Testbed Transmitter," Supervisors: S.Caban, M.Rupp, January 2012.

56. Leo Edlinger: "Vienna Wireless Testbed," Supervisors: S.Caban, M.Rupp, January 2012.

57. Heinz Haderer: "Wireless Testbed Receiver," Supervisors: S.Caban, M.Rupp, January 2012.

58. Alejandro Camacho Arias: "Analysis and interpretation of emulated data traffic in Android platform," Supervisors: M.Laner, P.Svoboda, M.Rupp, February 2012.

59. Jose Ramon Monteverde Almela: "Quality Assessment of a 3D Mobile Video Service," Supervisors: M.Ries, M.Rupp, May 2012.

60. Florent Kadrija: "Iterative Channel Estimation for UMTS Long Term Evolution," Supervisors: M.Simko, M.Rupp, Nov. 2012.

61. Markus Hofer: "Performance Evaluation of Differential Modulation in LTE-Downlink," Supervisors: M.Simko, M.Rupp, Jan. 2013

62. Sergio Lluch Guirado: "Localization of RFID tags," Supervisors: J.Kaitovic, M.Rupp, Feb. 2013

63. Stefan Zehetmayer: "Pre-Distortion Algorithms for Envelope Tracking Power Amplifiers," Supervisors: R.Dallinger, M.Rupp, April 2013.

64. Francisco de Haro Banos: "Localization of moving RFID readers," Supervisors: J.Kaitovic, M.Rupp, June 2013.

65. Martin Mayer: "Measurement Based Evaluation of Interference Alignment on the Vienna MIMO Testbed," Supervisors: M.Lerch, M.Rupp, Oct. 2013.

66. Victor Sen Abad: "Energy efficient Scheduling for LTE Uplink," Supervisors: S.Schwarz, M.Rupp, Nov 2013.

67. Gerald Artner: "Receiver Location Sensitivity of Interference Alignment," Supervisors: M.Lerch, M.Rupp, Nov. 2013.

68. Martin Müller: "Feedback-based LTE-Downlink Measurements," Supervisors: M.Lerch, M.Rupp, Nov. 2013.

69. Martin Meidlinger: "Enabling real-time feedback for LTE measurements with the Vienna MIMO Testbed," Supervisors: M.Lerch, M.Rupp, Nov. 2013.

70. Ronald Nissel: "Pilot-Symbol-Aided OFDM Channel Estimation in Doubly-Selective Channels," Supervisors: M.Lerch, M.Simko, M.Rupp, Nov. 2013.

71. Sana Zunic: "Coordinated Scheduling and Beamforming (CS/CB) in Downlink CoMP Transmission System," Supervisors: S.Schwarz, M.Rupp, June 2014. **Faculty award: best diploma thesis in 2014**

72. Gonzalo Iglesias Cayuela: "Modelling Energy Efficient Data Transmissions," Supervisors: P.Svoboda, M.Rupp, Sep. 2014.

73. X. Bernat Serret: "Performance of LTE Applying Transmit Antenna Selection Algorithms"; Supervisors: S. Schwarz, M. Taranetz, M. Rupp, Sep. 2014.

74. Portoles Colon Laura: "Robust CSI feedback for high user velocity," Supervisors: S.Schwarz, M.Rupp, Nov. 2014.

75. Adrià Yébenes Creus: "Multi-user MIMO Transmission in LTE Uplink," Supervisors: S.Schwarz, M.Rupp, Jul. 2015.

76. Beatrice Flores Carcelen: "Pre-Distortion Algorithms Implemented in Fixed-Point Arithmetic," Supervisors: R.Dallinger, M.Rupp, Jun. 2015.

77. M. Aguado: "Evaluating the Third Spatial Dimension in Wireless Communications," Supervisors: F. Ademaj, M. Taranetz, M. Rupp, Jun. 2016.

78. Stefan Pratschner: "Doubly-Selective Channel Estimation for LTE-A Uplink", Supervisors: M. Rupp, S. Schwarz, June 2016. **Faculty award: best diploma thesis in 2016**

79. Illya Safiulin: "Beamforming for LTE MBMS/MBSFN," Supervisors: M. Rupp, S. Schwarz, June 2016.

80. Jose Luis Martin Gonzalvez: "Detection of User Profiles and Tariff Classes in Mobile Networks Using Machine Learning Algorithms," Supervisors: M.Rupp, P.Svoboda, C. Midoglu, July 2016.

81. Alonso Martinez Castillo: "Temporal and spatial correlation analysis for mobile network benchmarking," Supervisors: M.Rupp, P.Svoboda, C. Midoglu, July 2016.

82. Martin Horak (Bacc.): "Data Visualization Framework for Crowdsourced Network Performance Measurements," Supervisors: M.Rupp, P.Svoboda, C. Midoglu, July 2016.

83. Kiril Kirev (Bacc.): "Modulation Schemes for mm Wave Transmissions," Supervisors: M.Rupp, E.Zöchmann, Dec. 2016.

84. Sergio Jimenez Gomez: "60 GHz WIFI as Autonomous Cruise Control," Supervisors: M.Rupp, E.Zöchmann, June 2017.

85. Felix Cano Paino (Bacc.): "Implementation and Evaluation of FD-MIMO Beamforming Schemes for Highway Scenarios, " Supervisors: F. Ademaj, M. Müller, S. Schwarz, M. Rupp, June 2017.

86. Bashar Tahir: "Construction and Performance of Polar Codes for Transmission over the AWGN Channel, " Supervisors: M.Rupp, S.Schwarz, Oct. 2017. **Faculty award: best diploma thesis in 2018**

87. Vaclav Raida: "Deriving a Network Perspective of Cellular Mobile Networks Based on Crowd Sourced Benchmark Tests ," Supervisors: M.Rupp, P.Svoboda, Nov. 2017.

88. Daniel Schützenhöfer (Bacc): "Einfügedämpfung eines LCDs bei Millimeterwellen und sichtbarem Licht," Supervisors: M.Rupp, E.Zöchmann, Nov. 2017.

89. J. Camas Jardi: "LTE-Advanced cell-specific reference signals in dependence of power allocation," Supervisors: M. Rupp, S. Schwarz, J. Rodriguez Fonollosa, Universitat Politècnica de Catalunya, July 2018.

90. Maruan Ibrahim (Bacc): "Mobility Load Balancing Intra-RAT intra-frequency Mobility Load Balancing," Supervisors: M. Rupp, P. Svoboda, Oct. 2018.

91. Agnes Fastenbauer (Bacc): "Evaluation and Application of Wrap-Around Techniques for System Level Simulation Network Geometries," Supervisors: M.Rupp, M.Müller, Nov. 2018.

92. Miriam Leopoldseder: "Data Driven Prediction of Crowd Mobility in Small Cell Environments," Supervisors: M.Rupp, P.Svoboda, May 2019.

93. Sonja Tripkovic: "Construction of Mobile Performance Maps using Clustered Crowdsourced Measurements," Supervisors: M.Rupp, P.Svoboda, June 2020. **Faculty award: best diploma thesis in 2020**

94. Lukas Eller: "Learning Representations from Crowdsourced Network Benchmarks," Supervisors: M.Rupp, P.Svoboda, Aug. 2020.

95. Alexander Schreiner: "Effective Method to Approximate PIM-Distortions in a Multicarrier-System," Supervisors: M.Rupp, S.Pratschner, June 2021.

96. Faruk Pasic, "Validation of High-Speed Emulation Techniques using 5G Waveforms," Supervisors: M.Rupp, S.Pratschner, July 2021.

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98. Alex Bokor, "System Level Simulation and Optimization of Multi-User MIMO Transmissions," Supervisors: S. Schwarz, M. Rupp, Oct. 2022.

99. Areen Shiyahin, "Quality of Service Aware Scheduling in Mixed Traffic Wireless Networks," Supervisors: S. Schwarz, M. Rupp, Oct. 2022.

100. Aleksandra Dordevic: "Efficient Wireless Coverage Maps using Sparse Gaussian Processes," Supervisors: M.Rupp, P.Svoboda, July 2023.

101. Philip Schwarzinger (Bacc): "Integration of Open-Loop Spatial Multiplexing in the Vienna 5G System-Level Simulator," Supervisors: M.Rupp, A.Fastenbauer, Oct. 2023.

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