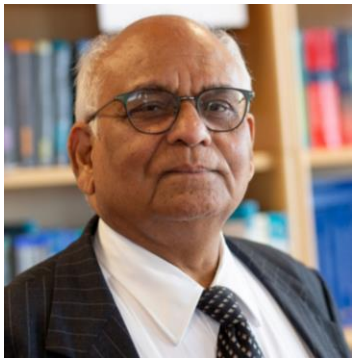
Faculty Profile



Ramjee Prasad
Professor Emeritus

- Department of Business Development and Technology

Postal address:
Birk Centerpark 15
8001
7400
Herning
Denmark
Email: ramjee@btech.au.dk
Mobile: +4540614248

Education

- Ph.D., Plasma Propagation in Waveguide, Birla Institute of Technology, Mesra, Ranchi, India, 1979
- M. Sc., (Electtonics Theory and Microwave Engineering), Birla Institute of Technology, Mesra, Ranchi, India, 1970
- B. Sc., (Electronics and Communications Engineering), Bihar Institute of Technology, Sindri, India (Now: Birsa Institute of Technology, Sindri, Jharkhand, India), 1968

Professional Experience

- **Founder President**, CTIF Global Capsule (CGC), April 2016 – Present
- **Founder Chairman,** Global ICT Standardization Forum for India, India, 2009-Present
- **Professor,** Wireless Information Multimedia Communications Chair, Department of Electronic System, Aalborg University, Denmark, June 1999-Present
- **Founder Director**, Center for TeleInFrastruktur, Aalborg University, Denmark – January 2004-Present
- **Co-director**, Center for PersonKommunikation, Aalborg University, Denmark – June 1999-December 2003
- **Founder Head and Program Director**, Centre for Wireless and Personal Communications, International Research Centre for Telecommunications -Transmission and Radar, Delft University of Technology, the Netherlands, 1988-1999
- **Professor**, Department of Electrical Engineering, University of Dar-Es-Salaam (UDSM), Tanzania, 1983-1988
- **Associate Professor & Head,** Microwave & Plasma Laboratory, Department of Electronics and Communication, Birla Institute of Technology, Mesra, Ranchi, India, 1970-1983
- **Honorary Professor,** University of Cape Town, South Africa
- **Honorary Professo**r, University of KwaZulu-Natal, South Africa
- **Distinguished Professor,** Department of Clinical Sciences and Translational Medicine

University of Rome “Tor Vergata”, Italy

Memberships

• Fellow, Institute of Electrical and Electronics Engineers (IEEE), USA
• Fellow, Institution of Electronics and Telecommunications Engineers (IETE), India
• Fellow, Institution of Engineering and Technology (IET), UK
• Fellow, Wireless World Research Forum (WWRF), Global
• Member, Netherlands Electronics and Radio Society (NERG), Netherland
• Member, Danish Engineering Society (IDA), Denmark

Awards and Recognition

- AppreciationAward for Remarkable Volunteer Efforts and Exceptional Accomplishments bySociety of Digital Policy and Management, Korea: January 20, 2016
- HonoraryAward for ICT Entrepreneurship for Social Impact from the Institution of Electronics and Telecommunications Engineers, India: May 17, 2016
- ConvergenceAward for Scholarly Achievements, Korea: January 24, 2015
- HonoraryDistinguished Alum from BIT Sindri Alumni Association of North America:December 1, 2015
- HonorableAward and Gold Medal from Technical University of Sofia, Bulgaria: Apri l 29,2014
- OutstandingOrganizational Leadership Award by the IEEE AESS: September 17, 2014
- Ridderkorsetaf Dannebrogordenen (Knight of the Dannebrog) from the Danish Queen due tointernationalization of top-class telecommunication research and education –2010.
- AalborgAmbassador – 2009.
- Awardof year host creator for arranging Wireless ViTAE – 2009.
- Felicitationas Eminent Engineer, Institution of Engineers, India – 2008.
- Memberto the Royal Business Delegation led by her Majesty, The Queen of Denmark Margarethe II to South Korea – 2007.
- Telenor'sResearch Award for impressive merits, both academic and organizational within the field of wireless and personal communication– 2005.
- SamsungElectronics Advisor Plaque of Thanks, for the great contribution as an Advisor for Samsung Telecommunication Network Business - 2005.
- YearlyAalborg-European Achievements Award of the Aalborg Mayor for a world leading expertise in Wireless Communication towards 4G – 2004.

- IEEECommunications Society Wireless Communications Technical Committee RecognitionAward for making contribution in the field of "Personal, Wireless and Mobile Systems and Networks" – 2003.
- IEEEVehicular Technology Society Award, for outstanding performance as Chairman of the Fall-1999 Vehicular Technology Conference – 2000.
- IEEEVehicular Technology Society 1994 Chapter of the Year Award presented to the IEEE Vehicular TechnologyCommunication Society Joint Chapter in Benelux– 1996.

Selected Patents

- " Apparatus and method for operating frequency resources in a mobile communication system" , (with Rahman, Muhammad Imadur; Reynisson, Ragnar Viôir; Fitzek, Frank Hanns Paul; Koo, Jin-kyu; Park, Dong-seek; Cho, Young-kwon; Kim, Young-kyun; Lim, Eun-taek; Jung, Jun-young) US Patent No. 7768987, Issued August 3, 2010
- "Coexistence Mechanism for Wireless Networks" (with Mauro De Sanctis; Marco Monti; Marina Ruggieri) Italy Patent No. RM2009A000050, Issued February 2, 2009.
- "Transceiver for use in wireless communication system, has determination unit that sets signal reception time interval to be smaller than transmission time interval, based on measurement of reception power at different time intervals" (with Kentako Nishimori; Yasushi Takatori; Shuji Kubota; Hiroyuki Yomo; Petar Popovski; Rocco Di Taranto) Japanese Patent No. JP2008311745, Issued December 25, 2008.
- "Wireless communication system e.g. wireless local area network (LAN) system, determines communication order of transmission with access point and terminal, so that interference to primary system is avoided" (with Kentako Nishimori; Yasushi Takatori; Shuji Kubota; Hiroyuki Yomo; Petar Popovski) Japanese Patent No. JP2008306663, Issued December 18, 2008.
- "Wireless communication system has determination unit that determines frequency band of secondary radio system as use frequency band when amount of egress interference given to primary radio system is smaller than threshold value" (with Kentaro Nishimori; Yasushi Takatori; Shuji Kubota; Hiroyuki Yomo; Petar Popovski) Japanese Patent No. JP2008306665, Issued December 18, 2008.
- "Array antenna apparatus for use in relay communication system, has communication quality determining part determining array antenna based on egress-interference signal and determining communication quality information" (with Kentako Nishimori; Yasushi Takatori; Shuji Kubota; Hiroyuki Yomo; Petar Popovski; Rocco Di Taranto) Japanese Patent No. JP2008306664, Issued December 18, 2008.
- "Array antenna transmittingreceiving apparatus for use in e.g. mobile telephone, has receiving weight calculation part for determining weighting value of transmission and reception signal at time of transmission" (with Kentako Nishimori; Yasushi Takatori; Shuji Kubota; Hiroyuki Yomo; Petar Popovski; Rocco Di Taranto) Japanese Patent No. JP2008306662, Issued December 18, 2008
- "Communication system has communication terminal to transmit received interference wave to another communication terminal using signal area which is known by communication stations of secondary systems" (with Kentako Nishimori; Yasushi Takatori;

Shuji Kubota; Hiroyuki Yomo; Petar Popovski; Rocco Di Taranto) Japanese Patent No. JP2008306661, Issued December 18, 2008.
- "Communication system and its communication method" (with Kentako Nishimori; Yasushi Takatori; Shuji Kubota; Hiroyuki Yomo; Petar Popovski; Rocco Di Taranto) Japanese Patent No. JP2008211342, Issued September 09, 2008.
- "Transmission and Reception Device, and Communication Method Thereof" (with Kentako Nishimori; Yasushi Takatori; Shuji Kubota; Hiroyuki Yomo; Petar Popovski; Rocco Di Taranto) Japanese Patent No. JP2008211341, Issued September 11, 2008.
- "Apparatus and method for operating frequency resources in a mobile communication system", (with Rahman, Muhammad Imadur; Reynisson, Ragnar Vioir; Fitzek, Frank Hanns Paul; Koo, Jin-kyu; Park, Dong-seek; Young-kwon; Kim, Young-kyun; Lim, Eun-taek; Jung, Jun-young) US Patent No. 20070093252, Issued April 24, 2007.*
- "Apparatus and method for assigning subcarrier in OFDMA communication system", (with Fitzek, Frank Hanns Paul; Wijting, Carl Simon; Theeuwes, Jeroen; Popovski, Petar; Suh, Chang-ho; Yoon, Seok-hyun; Hong, Sung-kwon; Cho, Young-kwon; Kim, Young-kyun; Park, Dong-seek; Ro, Jung-min) US Patent No. 2006007209460, Issued April 13, 2006.
- "Apparatus and method for transmittingreceiving header information in a wireless communication system with a multi-channel structure", (with Lee, Sung-jin; Cho, Young-kwon; Daniel, Katz Marcos; Park, Dong-seek; Son, Jung-je; Koo, Chang-hoi; Fitzek, Frank; Hanns Paul; Madsen, Tatiana Kozlova) US Patent No. 20060083270, Issued April 20, 2006.
- "A novel multirate orthogonal frequency division multiplexing system proposal to reduce intercarrier interference" (with Das, Suvra S.; Fitzek, Frank H. P.; Rahman, Muhammad Imadur) Patent Application No 964MUM2004, 2004.
- "Enhancing spectral efficiency of OFDM systems by Data Transmission over Pilot Tones" (with Das, Suvra S.; Rahman, Muhammad Imadur ; Fitzek, Frank H. P.) Patent Application No 963MUM2004, 2004.

Publications (latest)

Published more than 40 books, 1000 plus journal and conference publications, over 100 PhD Graduates and larger number of Masters (over 250). Several of his students are today worldwide telecommunication leaders themselves. Below is the list of selected papers with over 50 Citations (Google Scholar, August 29, 2016).

Books

- Context-Aware Communication and Computing: Applications for Smart Environment, Punnarumol Temdee and Ramjee Prasad, Springer Series in Wireless Technology, 2017.

- Breakthroughs in Smart City Implementation, Leo P. Ligthart and Ramjee Prasad, River Publishers Series in Communications, 2017.

- Human Bond Communication: The Holy Grail of Holistic Communication and Immersive Experience, Sudhir Dixit and Ramjee Prasad, Wiley, 2017.

Book Chapters

- Introduction to Human Bond Communication, Sudhir Dixit and Ramjee Prasad, Human Bond Communication, Wiley, 2017.

• Human-Centric IoT Network, Albena Mihovska, Ramjee Prasad and Milica Pejanovic, , Human Bond Communication, Wiley, 2017

• Smart City from CONASENSE Perspective, Leo P. Ligthart and Ramjee Prasad, Breakthroughs in Smart City Implementation, River Publishers Series in Communications, 2017.

• Role and Importance of the Cyber Security for Developing Smart Cities in India, Vandana Rohokale and Ramjee Prasad, Breakthroughs in Smart City Implementation, River Publishers Series in Communications, 2017.

• Smart Cities and Business Model Ecosystem, Peter Lindgren and Ramjee Prasad, Breakthroughs in Smart City Implementation, River Publishers Series in Communications, 2017.

Journal/conference Papers

•Radio Spectrum: Evaluation approaches, coexistence issues and monitoring, Liljana Gavrilovska, Pero Latkoski, Vladimir Atanasovski, Albena Mihovska, Octavian Fratu, Pavlos Lazaridis, Ramjee Prasad, Computer Networks, 2017.

•Aerial-Heterogeneous Network: A Case Study Analysis on the Network Performance Under Heavy User Accumulations, Purnima Lala Mehta and Ramjee Prasad, Wireless Personal Communications, 2017.

•An Evolutionary Mobility Aware Multi-Objective Hybrid Routing Algorithm for Heterogeneous WSNs, Nandkumar Prabhakar Kulkarni, Neeli Rashmi Prasad, Ramjee Prasad, International Journal of Rough Sets and Data Analysis (IJRSDA), 2017.

•Special Issue on “Future Tele-Infrastructure for Multi-sensory Devices (FIND)”, Marina Ruggieri and Ramjee Prasad, Wireless Personal Communications, 2017

•Performance of Human Bond Communications Using Cooperative MIMO Architecture, Maryam Rahimi and Ramjee Prasad, Wireless Personal Communications, 2017.

•GHMAC: Green and Hybrid Medium Access Control for Wireless Sensor Networks, Pranav M. Pawar, Rasmus Hjorth Nielsen, Neeli Rashmi Prasad, Ramjee Prasad, Wireless Personal Communications, 2017.

•Admission Control and Scheduling Algorithm for Multi-carrier Systems, Alexandru Vulpe, Albena Mihovska, Octavian Fratu, Simona Halunga, Ramjee Prasad, Wireless Personal Communications, 2017

.•Energy-efficient and improved eWALL: e2WALL, Ana Koren, Dina Simunic, Ramjee Prasad,

Wireless Personal Communications, 2017.

•LTE-Advanced Radio and Network Optimization: Basic Coverage and Interference Constraints, Fernando J Velez, Sofia Sousa, Jessica Acevedo Flores, Daniel Robalo, Albena Dimitrova Mihovska, Ramjee Prasad, IEEE Global Wireless Summit 2015International Symposium on Wireless Personal Multimedia Communications, 2017.

•Hybrid Accuracy-Time Trade-off Solution for Spectrum Sensing in Cognitive Radio Networks, Antoni Stefkov Ivanov, Albena Dimitrova Mihovska, Vladimir Poulkov, Ramjee Prasad, Networks, 2017.

•A Self-Itinerant Aerial Radio Architecture For Serving Place Time Variant User Accumulations, Purnima Lala Mehta and Ramjee Prasad, 37th Wireless World Research Forum Meeting: New Businesses Empowered by 5g, 2016.

•End-to-End Reliability and Optimization of Intra and Inter-Domain IMS-based Communication Networks, Chayapol Kamyod, Rasmus Hjorth Nielsen, Neeli Rashmi Prasad, Nattapol Aunsri and Ramjee Prasad, 2016

•Evaluation of secure capability-based access control in the M2M local cloud platform, Bayu Anggorojati, Neeli Rashmi Prasad, Ramjee Prasad, Telecommunication Systems Services and Applications (TSSA), 2016.

•HANET: Millimeter wave based intelligent radio architecture for serving place time capacity issue, Purnima Lala Mehta, International Conference on Wireless Communication, Vehicular Technology, Information Theory and Aerospace & Electronic Systems Technology (Wireless VITAE), 2016.

•Virtualization and Scheduling Methods for 5G Cognitive Radio Based Wireless Networks, Cornelia-Ionela Badoi, Neeli Prasad, Ramjee Prasad, Wireless Personal Communications, 2016

.•Self-Configurable Intelligent Distributed Antenna System for Resource Management in Multilayered Dense-nets, Ambuj Kumar, Albena Mihovska and Ramjee Prasad, Global Wireless Summit 2015.

•Dynamic Pathloss Model for Future Mobile Communication Networks, Ambuj Kumar, Albena Mihovska and Ramjee Prasad, Global Wireless Summit 2015.

•An Evolutionary Mobility Aware Multi-Objective Hybrid Routing Algorithm for Heterogeneous Wireless Sensor Networks, Nandkumar P Kulkarni, Neeli R Prasad and Ramjee Prasad, International conference on Internet of Things, Next Generation Networks and Cloud Computing, 2016

Selected Papers

- Richard Van Nee, Ramjee Prasad, “OFDM for wireless multimedia communications”, ArtechHouse, 2000, Cite: 5536.· Prasad, R. and Hara, S, “Overview of multicarrier CDMA”,

IEEE communications Magazine.Vol. 35, No. 12, pp 126-123, Cite: 2534.
· Ramjee Prasad, “OFDM for Wireless Communications Systems”, Artech House, 2004, Cite: 1013.· Ojanpera, T., Prasad R., “Wideband CDMA For ThirdGeneration Mobile Communications: Universal Personal Communications”, ArtechHouse, 1998, Cite: 787
· Ramjee Prasad, “CDMA for Wireless Personal Communications”, Artech House, 1999, Cite:713.
· Prasad Ramjee, Hara, Shinsuke “Design and Performance of Multicarrier CDMA System inFrequency-Selective Rayleigh Fading Channels”, IEEE Transactions on VehicularTechnology, Vol. 48, No. 5, 1999, pp. 122-123, Cite: 608.
· Shinsuke Hara, Ramjee Prasad, “Multicarrier techniques for 4G mobile communications”,Artech House, 2003, Cite: 599.· Hiroshi Harada, Ramjee Prasad, “Simulation and software radio for mobilecommunications: Volume 1”, Artech House, 2002, Cite: 491.
· Ojanpera, T. NokiaRes. Center, Espoo, Prasad R., “An overview of air interface multipleaccess for IMT-2000, UMTS”, IEEE Communications Magazine, Vol.36 No.9, 1998 pp.82-86, Cite: 444.· Prasad Ramjee, Ojanpera, T., “An overview of CDMA evolution toward wideband CDMA”, InIEEE Communication, Surveys and Tutorial, Vol.1 No1, 1998 pp. 2-29, Cite: 315.
· Prasad, R. and Hara, S, “An overview of multi-carrier CDMA”, IEEE 4th InternationalSymposium on Spread Spectrum Techniques and Applications Proceedings, 1996.Vol.1, September 22-25, 1996. Mainz, Germany, Cite: 289.
· Ramjee Prasad, Walter Konhauser, Werner Mohr, “Third Generation Mobile CommunicationSystems”, Artech House, 2000, Cite: 259.
· Chen, Kwang-Cheng , Prasad Ramjee , Poor, H.V, “Software Radio”. IEEE personal communications, Vol. 6, No. 4, 1999, pp. 12,Cite: 243.
· Prasad Ramjee , Nikookar, H , “Weighted OFDM forwireless multipath channels” ,IEICE Transactions on Communications, Vol. E83B,No. 8, 08.2000, pp. 1864-1872, Cite: 210.
· Ramjee Prasad, “Universal Wireless Personal Communication”, Artech House, 1998, Cite:207.· Ojanpera, T. Nokia Res. Center, Espoo Prasad R., “An overview of third-generationwireless personal communications: a European perspective”, IEEE Communication,Surveys and Tutorial, Vol 5. No. 6, 1998, pp. 59-65, Cite: 179.
· Kun Liu, Ramjee Prasad “Performance analysis of differential chain coding”,European Transactions on Telecommunications, Vol., No 4, 1992, pp. 323–330,Cite: 143.
· Gerard J. M. Janssen, Patrick A. Stigter and Ramjee Prasad “A model for BER evaluation of indoorfrequency selective channels using multipath measurement results at 2.4, 4.75and 11.5 GHz , In Mobile CommunicationsAdvanced Systems and Components Lecture Notes in Computer Science, 1994, Vol. 783,1994,344-355, Cite: 144.
· Farserotu, J., Prasad Ramjee, “A Survey of Future Broadband Multimedia Satellite Systems,Issues and Trends”, IEEE Communications Magazine, Vol. 38, No. 6, 2000, pp.128-133, Cite: 168.
· Jansen, M.G. Prasad R., “ Capacity, throughput,and delay analysis of a cellular DS CDMA system with imperfect power controland imperfect sectorization”, IEEE transaction on Vehicular Technology , Vol 44, No 1, 1995, pp. 67-75, Cite: 158.
· Arroyo-Fernandez,B., Fernandes, J. , Prasad Ramjee “CompositeReconfigurable Wireless Networks: The EU R&D Path Toward 4G” ,IEEECommunications Magazine, Vol. 41, No. 7, 2003, pp. 34-35, Cite: 128.

- Leon-Paul W. Niemel, Ramjee Prasad, “A novel description of handwritten characters foruse with generalised Fourier descriptors”, European Transactions onTelecommunications, Vol. 3, No. 5, 1992,pp. 455–464, Cite: 122.
· Tero Ojanpera, Ramjee Prasad, “WCDMA: Towards IP Mobility and Mobile Internet”, ArtechHouse, 2001, Cite: 120.
· Ramjee Prasad, Wijffels C. A.F.J. , Sastry K. L. A. , “Performance analysis of slottedCDMA with DPSK modulation diversity and BCH: coding in indoor radiochannels”, IEEE Communications Magazine OFDM for Mobile MultimediaCommunications, Artech House, Boston-London, 1999. Vol 27, No. 7, pp. 50-63,Cite: 119.
· Prasad Ramjee, “Cognitive Radio Technologies”, Wireless PersonalCommunications, Vol. 45, No. 3, 2008, pp. 277-279, Cite: 113.
· Prasad R. , Arnbak, J.C. “Comments on "Analysis for spectrum efficiency in singlecell trunked and cellular mobile radio , Vehicular Technology, IEEE Transactions on Vol 37, No.4,1988, pp. 220-222, Cite: 105.
· Prasad Ramjee, Cianca, E. “Spread Spectrum Techniques and their Applications toWireless Communications”, Journal of the Institution of Electronics andTelecommunication Engineers, Vol. 51, No. 1, 2005, pp. 5-18, Cite: 102.
· Jorguseski, L., Fledderus, E., Farserotu, J., Prasad Ramjee, “Radio Resource Allocation inThird-Generation Mobile Communication Systems”, IEEE Communications Magazine,Vol . 39, No. 2, 2001, pp. 117-123, Cite: 97.
· Hara, S.; Prasad, R., “DS-CDMA, MC-CDMA and MT-CDMA for mobile multi-mediacommunications”, IEEE 46th Vehicular Technology Conference, 1996. 'MobileTechnology for the Human Race', Vol.2, April 28- May 1, 1996. Atlanta, Cite: 94.
· Ramjee Prasad, Marina Ruggieri, “Technology trends in wireless communications”, ArtechHouse, 2003, Cite: 83.
· Ramjee Prasad, Luis Muñoz, “WLANs and WPANs towards 4G wireless”, Artech House, 2003,Cite: 82.
· Linnartz, Jean-Paul M. G.,Prasad Ramjee, “Threshold crossing rate and average non-fade duration in aRayleigh-fading channel with multiple interferers” , The Smithsonian,NASAAstrophysics Data System journal,1989, Cite: 81.
· Janssen, G.J.M.; Prasad, R., “Propagation measurements in an indoor radio environment at2.4 GHz, 4.75 GHz and 11.5 GHz”, IEEE 42nd Vehicular Technology Conference,1992, May 10-13, 1992. Colorado, USA, Cite: 80.
· Sudhir Dixit, Ramjee Prasad, “Wireless IP and Building the Mobile Internet”, ArtechHouse, 2003, Cite: 80.
· Prasad R. , Kegel, A. , de Vos, A. , “Performance of microcellular mobile radioin a cochannel interference, natural, and man-made noise environment”,Vehicular Technology, IEEE Transactions, Vol 42 ,No 1, 1993pp. 33 – 40, Cite:79.
· Ramjee Prasad, “Applied Satellite Navigation Using GPS, GALILEO, and AugmentationSystems”, Artech House, 2005, Cite: 74.
· Witrisal,K., Kim, Y.-H. ,Prasad Ramjee "A New Methodto Measure Parameters of Frequency-Selective Radio Channels using PowerMeasurements”, IEEETransactions on Communications,Vol. 49, No. 10, 2001, pp. 1788-1800, Cite: 72.
· Prasad R, Kegel, A., Olsthoorn, J., “Spectrum efficiency analysis formicrocellular mobile radio systems” , Electronics Letters, Delft Univ. ofTechnol., Netherlands Vol: 27, No. 5, 1991, pp. 423– 425, Cite: 65.

· Prasad R., “Performance analysis of mobile packet radio networks in real channels within hibit-sense multiple access”, Communications, Speech and Vision, IEEProceedings I, Vol 138 No. 5, 1991, pp. 458 - 464, Cite: 50.