Mohamed Ibnkahla Ph.D.

Contact

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Biography

Mohamed Ibnkahla was born in Souuse, Tunisia. He accomplished the high school at Lycee Teboulba, Tunisia. He was enrolled in the `mathematiques speciales' program at Lycee Hoche, Versailles, France (1986-1989). He then joined the National Polytechnic Institute of Toulouse (INPT), Toulouse, France, where he obtained an Engineering degree in Electronics in 1992, an M.Sc.degree (DEA) in signal and image processing in 1992, a Ph.D. degree in signal processing in 1996, and an HDR degree (Habilitation a Diriger des Recherches) in digital communications and signal processing in 1998. Dr. Ibnkahla joined the Electrical and Computer Engineering Department, Queen`s University in 2000, where he is now Associate Professor.

He was assistant professor at INPT (1996-1999) in the Electronics Department. From 1994 to 1999, Dr. Ibnkahla was responsible for several joined projects with the French Space Agency (CNES, Toulouse, France). These projects applied adaptive neural network techniques to satellite communications. He was the Technical Manager of the European Commission ACTS - NEWTEST program which was devoted to mobile satellite channel (S-UMTS) equalization (1996-1999).

He is currently leading several projects applying wireless sensor networks to several areas such as forest monitoring, wildlife and species at risk tracking, smart grid, drinking water monitoring, food traceability, intelligent transportation systems, sustainable communities, etc. His research is supported by industry and government agencies such as Altera Corporation, Lunaris Inc., Canadian Microelectronics Corporation (CMC), Ontario Ministry of Research and Innovation, Ontario Ministry of Natural Resources, Ontario Centers of Excellence (OCE) and the Natural Sciences and Engineering Research Council of Canada (NSERC).

His research interests include Wireless Communications, Sensor Networks, Neural Networks, Adaptive Signal Processing, Satellite Communications, and Cross-layer Design (including the physical layer). He was invited to give tutorials in these areas in

several conferences such as GLOBECOM'2007 (Washington, D.C.), ICASSP'2008 (Las Vegas, Nevada), ICT'10 (Qatar), etc.

Dr. Ibnkahla was the recipient of the INPT Leopold Escande Award in Signal and Image Processing for the year 1997. He received the Ontario Premier's Research Excellence Award (PREA) in 2001, in recognition for his contributions to mobile communications. He also received the Favorite Professor Award, department of Electrical and Computer Engineering, Queen's University, in June 2004.

Research Interests

- Cognitive networks
- Cognitive radio
- Smart grid communications
- Radio Frequency Identification (RFID) system design
- Wireless sensor networks analysis, design and applications
- Signal processing for wireless communications
- Heterogeneous networks
- Cross-layer design (including the physical layer)
- Adaptive MAC protocols
- Adaptive signal processing and system identification

Current Research Projects

- Wireless sensor networks for environment monitoring
- Wireless sensor networks for smart grid
- Wireless sensor networks for intelligent transportation systems
- Multi-band cognitive radio
- Cognitive communications networks
- RFID system design and integration
- Adaptive modulation for wireless communications
- Adaptive signal processing for wireless communications

Research and Graduate Studies Opportunities

- Many offers are available at the M.Sc. and Ph.D. levels.
- Postdoctoral fellowships.

2011-2012 Courses

- ELEC 862 (Winter): Wireless Mobile Communications
- ELEC 471 (Fall): Computer Networks
- ELEC 490 (Fall/Winter).

Publications

Queen's Wireless Communications and Signal Processing Laboratory (WISIP)