

**UFE**  
**Faculty of Engineering**  
**Individual activity sheet**



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Faculty: Faculty of Engineering

Membership institution: French University of Egypt  
**Coordinator of the Faculty of Engineering**  
**Head of the Informatics Research Center (CRI)**

Professor (full or associate)  HDR  First Class PC1, National promotion

Full time researcher  HDR

Particular position: Secondment from the **Université d'Avignon et des Pays de Vaucluse** - Laboratoire d'Informatique d'Avignon (LIA) - Computer Sciences Laboratory

**1) Education:**

- HDR « Title to supervise researches» in *Computer Sciences* of the University of Cergy-Pontoise, 12/22/2000, Title: Contribution to the Conception of Multimedia Systems for heterogeneous Networks, Chair of the Jury: J.-J. PANSIOT, HDR Thesis supervisor: Professor M. TREHEL. *This is an important diploma in France to allow Associate professors to become Professor and hence to supervise PhD students.*
- Ph.D. in *Computer Science* of the University of Franche-Comté, 07/08/1993, Title: Contribution to Protocols Validations: Reduction of state space and decidability of bounded Character. Thesis supervisor: M. TREHEL, Chair of the Defense: professor D. ARQUES.
- M.S. in *Computer Science* of the University of Franche-Comté (Besançon), 07/08/1988,
- B.S. in *Computer Science* of the University of Nancy in 1985.

**2) Professional Activities:**

- **Current Situation:** International Technical Expert at the French Foreign Ministry - Coordinator of the Faculty of Engineering - Professor at the French University of Egypt (UFE).
- **Till Nov. 30, 2012:** Professor at the University of Avignon, Computer Sciences Department, since Sep. 1, 2001. Promoted to the first class of professors (special distinction in France) by the national council of universities CNU 27 (computer science section), since September first, 2010.
- **Award of PES (French Scientist Excellency) "Prime d'Excellence Scientifique"** since Sept. 2011 till August 2015 but cancelled because of my secondment to UFE.
- **September 1, 2012- December 30, 2012:** Invited Professor at the University of Nottingham, UK - Department of Computer Sciences
- **April 1, 2009- August 30, 2009:** Invited Professor at the University of Montreal. Montreal, Canada - DIRO Department, LRC Laboratory
- **Since October 1, 1998; 1st renewal Oct. 2003; 2nd renewal Oct. 2007:** Award and grant of doctoral supervision and research: *This is a National French recognition given for a period of 4 years. I received it 3 successive times.*
- **September 1st 2005- August 30th 2006:** Invited Professor at the Ecole Polytechnique de Montréal, Canada
- **From September 1, 1994 to August 30, 2001:** Associate Professor at the "Institut Polytechnique de Sévenans (IPSé)" that became University of Technology of Belfort-Montbéliard (UTBM).
- **From February 14, 1994 to August 31, 1994:** Assistant professor (ECC)<sup>1</sup> at the IPSé,
- **From October 1, 1988 to September 30, 1993:** Junior lecturer at the IUT of Belfort,
- **From October 1, 1987 to May 30, 1988:** - Instructor in Computing at the Faculty of Science of Besançon, and - Instructor at the Faculty of Medicine of Besançon,

**3) Teaching activities:**

- Distributed Multimedia Architectures and synchronization
- Mobiles Communications

<sup>1</sup> Responsibilities of Researches and teaching of an ECC are identical to those of a senior Lecturer.

- Conception and Verification of Communication Protocols
- Quality of Service and Real time protocols
- Programming of networks Protocols
- Mobility Protocols and Multicast
- Algorithmic and structured methods / C programming language

#### 4) **Research activities:**

My research activities can be decomposed, according to a chronological order, into four main axes:

- **Specification and verification of Communication Protocols**, from 1989 till 1996. This axis constitutes the works in my Ph.D. thesis and some years after.
  - **Multimedia Synchronization in the mobile and broadband networks**, since 1997. We were interested in the multimedia synchronization protocols in groups on heterogeneous networks and in the implementation of the multimedia applications such as the tele-teaching and the videoconference,
  - **Multicast with Quality of Service in the mobile networks**, since 2000,
- Axes 2 and 3 constituted my research works for the obtaining of my HDR "Habilitation to supervise researches", a French diploma,
- **Multicast and Management of the Quality of Service** {energy conservation, bandwidth, error rate, security, etc.} in mobile ad hoc networks. As application to mobile ad hoc networks, we are interested in the architectures and in the inter-vehicular communications for the safety of the drivers.
  - **Localization, routing and reliability in the wireless sensors networks**. It is a question of defining new plans allowing localizing in a distributed way and with accurate precision of a large number of sensors, initially with unknown position. The peculiarity of these methods is that they require more precaution because they are executed on sensors with low capacity of batteries.
  - **Security in mobile ad hoc and vehicular networks**. I give special interests to intrusion detection systems, monitoring and proposals of secure architectures and routing protocols based clustering.

**Key words:** *Multimedia protocols, Distributed computing, Quality of Service, Security, Wireless and Mobile networks.*

#### 5) **Strong research skills and highlight results:**

I was the header of Computer Networks and Multimedia Applications group (RAM) of the Computer Laboratory of Avignon from 2001 to 2009. I have several international collaborations, for supervising MsC and PhD students with Canada, UK, Morocco and Tunisia. I have been from September 2005 to September 2006 in sabbatical year for research at the Mobile Computing and Networking Research Laboratory, Department of Computer Science, Ecole Polytechnique de Montréal. I have been visiting professor from September 1, 2012 to December 31, 2012 at the University of Nottingham at the Computer Sciences Laboratory/Horizon.

I was responsible of the speciality "Networks, Telecoms and Multimedia", Professional and Research, of the Master (MsC) Computer Engineering and Mathematic, Techniques and Sciences of the University of Avignon 2001-2006.

I am involved in several national and international projects. : IEEE Wireless Communication Magazine, Wiley WCMC, SCN, IJCS, Elsevier Ad Hoc, JNCA. I serve as General Chair of the IEEE WiMob since 2008 and MoWNet since 2011. He chairs many IEEE international conferences and technical symposia such as VTC, ICC and Globecom. I participate to the steering and the program committee of many IEEE international conferences. I served as a Guest Editor of several special issues. I am IEEE senior member, member of the CA of the IEEE French section, of the Technical Committee IEEE ComSoc Communications and Information Security (CISTC), Vice Chair of the France IEEE student activities and Publications Vice Chair of IEEE COMSOC CISTC. I was member of the French Council of Universities (CNU section Computer Sciences N° 27) 2003-2007.

I served as expert of many national projects (ANR), laboratories (AERES), and MsC curriculums (MSTP).

#### 6) **Scientific production:**

**5 major publications** recent since 2010/01/01:

- A. Benslimane, C. Saad, J.C. König and M. Boulmal, "Cooperative Localizations in Wireless Sensor Networks: Free, Signal and Angle based techniques," **Wireless Communications and Mobile Computing Journal**, John Wiley InterScience, 2012.
- A. Benslimane, T. Taleb, and S. Rajarajan, "Dynamic Clustering-based Adaptive Mobile Gateway Management in integrated VANET - 3G Heterogeneous Wireless Networks," accepted for publication in the **IEEE JSAC** special issue on Vehicular Communications and Networks, Vol. 29, N°. 3, March 2011.
- A. Benslimane, S. Barghi and C. Assi, "An Efficient Routing Protocol for Connecting Vehicular Networks to the Internet", **Pervasive and Mobile Computing Journal, Elsevier publisher**, 6 October 2010.
- T. Taleb, A. Benslimane, and K. Ben Letaief, "Towards an Effective Risk-conscious and Collaborative Vehicular Collision Avoidance System," **IEEE Transaction on Vehicular Technology**, 2010.
- T. Taleb, A. Benslimane, "Design Guidelines for a Network Architecture Integrating VANET with 3G & Beyond Networks", IEEE Globecom 2010, Miami, Florida, 6-10 December, 2010. **BEST PAPER AWARD!**

#### 7) **Distinctions and Awards:**

- **Award of PES (French Scientist Excellency) "Prime d'Excellence Scientifique" since September 2011 till August 2015; interrupted on December 1 2012 because of my detachment to UFE.**
- Best paper award IEEE Globecom 2010.
- Publications Vice-chair of the Technical Committee IEEE ComSoc Communications and Information Security (CISTC), 2009-2011.
- Editor of the (Annual) IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob) since 2008, proceedings published by IEEE Xplore digital library.
- Editor of the (Annual) *International Conference on Selected Topics in Mobile and Wireless Networking (iCOST)* since 20011, proceedings published by IEEE Xplore digital library.