

LUIS GUILLERMO MARTÍNEZ BALLESTEROS

Date of Birth: February 19, 1981
Ph.D Student at Mobile Services Lab
Royal Institute of Technology (KTH), Sweden
Nationality: Colombian
Mobile: (46) 723263571
E-mail: lgmb@kth.se

EDUCATION

- **Bachelor degree in Computer Systems Engineering at National University of Colombia (2001).**
Bachelor Thesis Title: Design of a VOIP network for the National University of Colombia in Bogotá.
Modules included: Structured Programming, Software Engineering (Including Object Oriented Theory), Networks and Communication Systems
- **Master degree in Telecommunication Engineering at National University of Colombia (2008)**
Master Thesis Title: Survey and Analysis of the Required Technology Transfer on Mobile Personal Communications Network (PCS) towards Mobile IP at Signaling and Routing Level.
Modules included: Wireless Networks, Communication Systems, Regulatory Aspects in Telecommunications Market, Networks, and IP Protocol..
- **PhD in Information and Communication Technology, Royal Institute of Technology (KTH) – Sweden (Second Year)**

RESEARH ACTIVITY

- **Current Topic:**
I am working on the use semantic knowledge, which is describing the models of radio resource utilization related to a desired QoE for a class of mobile services/apps, with the goal to optimize wireless communication spectrum, cost and energy considering elements of Human-Computer Interaction.
- **Previous Research Topics:**
QoS and QoE assessment within IP networks, at Sergio Arboleda University. Research leader.
As researcher in CITIC - Ecuador, I worked with different project related to NGN infrastructure, providing advice to regulatory bodies of Ecuador.

PUBLICATIONS

Conferences

- L. Martinez, P. Lungaro and Z. Segall; “A Novel Resource Management Scheme in Wireless Networks Based on Quality of Experience (QoE)”, Wireless ADHOC 2011. Sweden.
- Ballesteros, L.G.M.; , "Towards a methodology to define Service Level Agreements in a convergent network scenario," ANDESCON, 2010 IEEE , vol., no., pp.1-3, 15-17 Sept. 2010 doi: 10.1109/ANDESCON.2010.5632320
- C. Herrera, L.Martinez; “Definition of Service Level Agreement including QoS and QoE parameters. ITECKNE Magazine. 2010. P. 207-212. Language: Spanish
- D. Navarro, J. Villarreal and L. Martínez. “Evaluation of QoS metrics of IPTV service based on IMS and MIPv4 and MIPv6”. 2010. P.175-183.
- L. Martinez and Z. Ramos. Survey and Analysis of Technology Transfer Required to Mobile IP in Personal Communications Networks (PCS) at Signaling Level, Proceedings Jornadas Telecom. I+D 2006, ISBN-13: 978-84-690-4355-4 N° Registro: 07/16529.
- L. Martinez and Z. Ramos. Technology Transfer Required to Mobile IP Personal Communications Networks (PCS) at Signaling Level, Proceedings Andescon 2006, ISBN-978-9978-45-920-1
- L. Martinez and Z. Ramos. Design of a Software Simulation Environment of a 4G Cellular Mobile Network based on Mobile IP and SIP protocols, Proceedings Jornadas Telecom. I+D 2006, ISBN-13: 978-84-690-4355-4 N° Registro: 07/16529.
- L. Martinez and Z. Ramos. Survey and Analysis of Technology Transfer Required to Mobile IP in Personal Communications Networks (PCS) at Routing Level, Proceedings, JST2007: Symposium of Telecommunications Systems, ISSN: 1390-3608.
- L. Martinez and Z. Ramos. Proposal of Technology Transfer Model Required Towards Mobile IP in Personal Communications Network (PCS) at Signaling and Routing Level, JST2008: Symposium of Telecommunications Systems, ISSN: 1390-3608.

Just Submitted

- L. Martinez, P. Lungaro and Z. Segall; “A Comparison of Predictive Radio Resource

Management Schemes Based on Interruptions Prevention”, submitted to: The 6th International Conference on Next Generation Mobile Applications, Services and Technologies (NGMAST2012), France.

- L. Martinez, K. Tollmar and Z. Segall; “Evolution of the relation between HCI and the QoE concept”, submitted to: TBD.

HONORS AND AWARDS

- First place in the admission process to the Master in Telecommunications Engineering.
- Awarded with a scholarship of National University to carry on my Master studies.
- Bachelor and Master Graduation with honors. Both theses were laureate projects.
- Awarded with a Colombian government scholarship to carry on my PhD studies.

MOTIVATION

- As part of my research work, which includes the use of the concepts based on cognitive radio networks to adjust the management of wireless networks to a desired QoE, the concepts proposed in the thematic might help me to incorporate important elements of Game Theory in my research, allowing to find points of equilibrium between the expected level of satisfaction coming from the users and the limited wireless resources under the control of content and network providers. Knowledge received from this 4-days Summer School will have a direct impact in the path of my research.

On the other hand, and as my second motivation to attend this course, I have a particular interest on the consolidation of a contacts network that allows me to incorporate some of the new “hot topics” in ICT within the R&D system in my country, Colombia. My country, sponsoring PhD students, is committed to technological development. From my point of view, the way to reach this goal is to identify and open new research areas for others to follow, and look for ways to adapt our country to the social changes arising from new technological waves.