

DOLORS SALA

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EDUCATION

- ?? **Ph.D.**, Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA USA, March 1998.
Dissertation Title: ``Design and Evaluation of MAC Protocols for Hybrid Fiber/Coaxial Systems".
- ?? **Master of Science**, School of Electrical and Computer Engineering, Georgia Institute of Technology, June 1995.
Area of specialization: Telecommunications.
- ?? **Graduate Courses**, Telecommunications Engineering School, Universitat Politecnica de Catalunya (UPC), Spain,
September 1990 - June 1993. (Ph.D. Program: Discrete Mathematics and Telematics).
- ?? **Bachelor of Science** in Computer Science, Universitat Autònoma de Barcelona (UAB), June 1990.

ADDITIONAL TRAINING COURSES

“Managing Technical Professionals and Organizations”, Sloan School of Management, Massachusetts Institute of Technology, Cambridge, MA, USA, December 11-12, 2000. A two-day program for senior managers.

WORK HISTORY

Research Professor, Telecommunications School, Universitat Pompeu Fabra, Barcelona, Spain	2003
Senior Staff Scientist, Residential Broadband Business Unit, Broadcom Corp., Duluth, GA USA	2000 – 2002
Senior Research Engineer, Digital Furnace Corp., Atlanta, GA USA	1999 – 2000
Staff Software Engineer, Internet and Networking Group, R&AD, Motorola, Mansfield, MA USA	1998 – 1999
Research Assistant, Broadband Telecommunications Center, Georgia Institute of Tech., Atlanta, GA	1994 – 1998
Summer Intern, Nortel Networks, Atlanta, GA USA	Summer 96
Research Assistant, Wireless Lab., Georgia Institute of Technology, Atlanta, GA	1993 – 1994
Assistant Professor, Universitat Autònoma de Barcelona, Bellaterra, Barcelona, Spain	1990 – 1993
Software engineer, C.D.S. SIEMENS, Barcelona, Spain	1989 – 1990

RELEVANT EXPERIENCE

Research Professor, Telecommunications School, Universitat Pompeu Fabra **2003-Present**

- ?? Research Professor under the Program Ramon y Cajal
- ?? Research Interests: residential broadband access technologies, including the design of the access mechanisms, and services (including access security, quality of service..) as well as the adoption of these technologies in the society.

Senior Staff Scientist, Residential Broadband Business Unit, Broadcom Corp., Duluth, GA **2000–2002**

Initial responsibilities included completing the design, performance evaluation and technology transfer of PROPANE. After completion, the responsibility was to identify new business opportunities and define the next generation products.

- ?? Identify and design the next generation products for residential broadband business unit (June 2000 – Nov 2002)
 - ?? Identify technologies where DOCSIS could be used or expertise could be leveraged. Work involved market study, and evaluation of economic and technical feasibility of access architectures and technologies for a variety of service providers (MSO/ILEC/CLEC/MLEC). Decided to focus on passive optical networks (PON) and Ethernet in the First Mile (IEEE802.3ah EFM). Commitments from customers and service providers were starting to emerge.
 - ?? Design Ethernet protocol extension to operate in Passive Optical Networks (PON). Six patents filed.
 - ?? Drive customers and service providers to common specifications to guarantee high volume. Drive IEEE 802.3ah EFM Task Force PON protocol specification (Member of the editing team, led PON requirements, 802.1-802.3ah PON interface specification, and security effort to the formation of a new IEEE802 Study Group). Chair IEEE 802 Link Security Executive Committee Study Group, Nomination Nov 2002.
- ?? Propane technology transfer and roadmap planning (March 2000-June 2000). One patent filed.
- ?? Managed and supervised the research team including three to six researchers, engineers and students (March 2000-June 2000). Additional projects included the design of a high-speed packet classifier and Data collection and traffic modeling of existing HFC networks. An automatic tool for data collection was built. One patent filed.
- ?? Additional professional activities and university relations include FTTHC, Univ Industry Advisory Board, Teaching graduate courses, review of technical conferences and journal publications.

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Senior Research Engineer, Digital Furnace Corporation, Atlanta, GA 1999–2000

- ?? Company description: Digital Furnace was a start-up company focusing on high performance protocols for HFC networks. Founded at the beginning of 1999 and acquired by Broadcom on March 2000.
- ?? Responsible of the technical innovation of the company and led the research team composed of three to four engineers and graduate students. The result was the PROPANE MAC protocol technology and the deployment roadmap based on different levels of compatibility with DOCSIS standard. Nine patents filed.
- ?? Led technical due diligence of the acquisition

Staff Software Engineer, Internet and Networking Group, Research and Advanced Development, Motorola Inc., Mansfield, MA, USA, 1998–1999

- ?? Responsible of evaluating the Quality of Service (QoS) architecture of an ATM switch product and designing a connection admission control (CAC) algorithm for this product

Research Assistant, Broadband Telecommunications Center (BTC), Georgia Institute of Technology, 1994–1998

- ?? Design and evaluation of MAC protocols for Hybrid Fiber/Coaxial (HFC) networks
- ?? Led the technical work of several industry contracts (Media4/Intelsat, CableLabs, Com21, Scientific-Atlanta) on the area of access protocols. Also supervised and coordinated the team of two to three students and engineers participating in the contracts.
- ?? Patent Granted: J. Limb, D. Sala “System and method for communicating data in a cable network”, Provisional: January 1998, Filed: January 1999, Serial No: 09/228,852.

SELECTED PUBLICATIONS AND TECHNICAL CONTRIBUTIONS

Selected Journal and Conference Papers

1. Dolors Sala, John O. Limb, Sunil Khaunte, “Adaptive Control Mechanism for Cable Modem MAC Protocols”, Proc. INFOCOM'98, San Francisco, CA, March 24-28, 1998.
2. John O. Limb, Dolors Sala, “A Protocol for Efficient Transfer of Data over Fiber/Coax Systems”, IEEE/ACM Transactions on Networking, Vol. 5, No. 6, pp. 872-88, December 1997. Shorter version of the paper in Proc. INFOCOM'96, pp. 904-911, San Francisco, CA, March 24-28, 1996.
This paper was translated in Chinese by F. Gao and published in a Chinese IEEE journal.

Selected Contributions to Standardization Bodies

1. “Link Security for IEEE 802 Networks”, Nov 2002, IEEE802.3 Call for Interest on Link Security. Project definition presentation. It can be found at: http://www.ieee802.org/3/efm/public/may02/sala_2_0502.pdf
2. “An Efficient System Solution for EPON Compliance”, May 2002, IEEE802.3ah. Contribution can be found at: http://www.ieee802.org/3/efm/public/may02/sala_2_0502.pdf
3. D. Sala, J.O. Limb, S. Khaunte “Performance of Continuous-Mode MAC Protocols”, IEEE802.14/96-251, Denver CO, January 1997.

ADDITIONAL ACTIVITIES

- IEEE member. Reviewer for several conferences and publications
- Alfredo Estrada Award to outstanding Hispanic students, Georgia Institute of Technology: 1995 and 1996
- Olympic Volunteer: VIP Hostess during 1996 Olympic Games, Atlanta

PERSONAL INFORMATION

Nationality: Spanish
US Green card holder
Languages spoken: English, Spanish, Catalan and notions of French