

P13: Technical University of Catalonia - UPC (Spain)

Description of expertise & activities

The Universitat Politècnica de Catalunya (UPC) (http://www.upc.edu/) is a public university devoted to high level education and research excellence in engineering. The participation of the UPC in BONE Network of Excellence will be carried out by the Advanced Broadband Communications Centre (CCABA: http://www.ccaba.upc.edu), which integrates several UPC research groups with interests in complementary communications fields. The BONE UPC team will consist of researchers belonging to the Optical Communication group (Signal Theory and Communications Dept.) and the Broadband Communications System group (Computer Architecture Dept.). Putting them together, the main strengths of these groups are in the area of FTTH networks, advanced modulations formats, IP/WDM/GMPLS protocols for the optical control plane, management, modelling, performance evaluation and traffic engineering in optical networks, and QoS provisioning in optical burst/packet switched networks.. The UPC-CCABA has participated in many projects of the different European Framework Programs dealing with networking topics, such as LONG, LION, and DAVID IST projects, and in the Action COST 263 (Quality of Future Internet Services). Within the VI Framework Program, the CCABA has participated in the NOBEL Integrated Project, in the e-Photon/ONe and E-NEXT Networks of Excellence and in the Action COST 266 (Advanced Infrastructures for Photonic Networks). Currently the CCABA is participating in EuQoS and NOBEL-2 IPs, in the e-Photon/ONe+ NoE, and in the Action COST 291 (Towards Digital Optical Networks).

Tasks within BONE

WP01	Dissemination & Outreach
WP02	Teaching
WP12	VCE Services and Applications
WP13	VCE Access networks
WP14	VCE Optical switching systems
WP15	VCE Transmission techniques
WP21	TP Service aware optical network architectures
WP22	TP MPLS, GMPLS and routing
WP24	TP edge-to-node adaptation for hybrid networks

Key personnel

Prof. Josep Solé-Pareta (pareta@ac.upc.edu) obtained his MsC degree in Telecom Engineering in 1984, and his Ph.D. in Computer Science in 1991, both from the UPC. In 1984 he joined the Computer Architecture Department of UPC. Currently he is Full Professor with this department. He did a Postdoc stage (1993 and 1994) at the Georgia Institute of Technology. He is co-founder of the CCABA at UPC. His publications include several book chapters, more than 100 papers in relevant international journals and refereed conferences. His current research interests are in Traffic Monitoring and Analysis and High Speed and Optical Networks with emphasis on traffic engineering, traffic characterisation, MAC protocols and QoS provisioning.

Prof. Josep Prat (jprat@tsc.upc.edu) received the M.S. degree in telecommunications engineering in 1987 and the Ph.D. degree from the Universitat Politècnica de Catalunya (UPC), Barcelona, in 1995. He has mainly investigated on broadband optical communications with emphasis on high bit-rate optical systems, access networks and WDM transmission characterization and control. In 1998 he was a guest scientist in the University College of London. Author of the book "Fiber-to-the-Home Technologies", Kluwer Ac. Publishers. He is Full Professor in the Optical Communications Group of the Signal Theory and Communications Department of the UPC, and was Vice-Dean of the ETSETB Engineering School of the UPC (2000-03), in charge of laboratories and infrastructures.

Dr. Sergi Sánchez-López (sergio@ac.upc.es) received his BS degree in telecommunication engineering from the UPC, his MS degree in electrical engineering in 1996 from University of Barcelona and he got his PhD in Telecommunications Engineering in 2003 from the UPC. In 1989 he joined the Computer Architecture Department of UPC. Since 1992 he has been an Associate Professor with this department. He is member of the Advanced Broadband Communications Centre of UPC and his publications include several book chapters, 2 papers in relevant international journals and more than 20 papers in international refereed conferences. His current research interests are in Broadband Internet and high Speed and Optical Networks, with emphasis on traffic engineering, routing algorithms, Control Plane and Multi-Domain Resilience. Currently he is TPC Co-chair of ONDM 2007.

Dr. Davide Careglio (careglio@ac.upc.edu), Associate Professor.

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