



P31: Scuola Superiore Sant'Anna di Studi Universitari e Perfezionamento - SSSUP (Italy)

Description of expertise & activities

Sant'Anna School of University Studies (Scuola Superiore Sant'Anna, <http://www.sssup.it>) is a public education institution located in Pisa, Italy. It offers complementary courses with respect to those offered by the University of Pisa at the undergraduate level while it has its own PhD programs at the graduate level. The traditional goal is to train highly selected, gifted young scholars for scientific research and the teaching profession. In the year 2000, the School opened a new research and teaching areas related to Optical Communications and Networks. Since then, a new research group has been established, which today includes two Full Professors, three Associate Professors, five Assistant Professors several researchers and many PhD as well as ordinary students. The research activity covers components, systems and networks, including both theoretical and experimental activities. Research is carried out in deep integration with the CNIT National Laboratory of Photonic Networks. Sant'Anna's "optical networks group" has been awarded a special status from the Italian Ministry of University and Research ("National Excellence Center"). The total number of people operating in the Center in year 2006 is approximately 50.

The current Research Staff of Sant'Anna took part in the following EU funded projects: LOBSTER (Large Optical Bandwidth by amplifier Systems based on Tellurite fibres doped with Rare earths), ATLAS (Advanced Terabit Lambda Shifted transmission), NOBEL and NOBEL Phase 2 (Next generation Optical network for Broadband European Leadership), e-Photon/ONE and e-Photon/ONE+ as well as in many research projects funded by the Italian Research Ministry and other international efforts. In year 2006, the "optical group" published approximately 100 papers in international journals and contributions to international conferences. The competence of the Center of Excellence ranges from optical networks control and management, performance evaluation and design to optical communication systems, devices and components.

Tasks within BONE

WP02	Teaching materials and Master feasibility definition
WP11	Provisioning aspects in metro/core networks
WP12	WP leader
WP14	Technology-aware control plane and optically controlled switching systems
WP21	Service Oriented Grids
WP22	PCE and multi-layer aspects
WP26	Physical impairment aware control plane

Key personnel

Piero Castoldi, (contact person and unit responsible) is Associate Professor in Telecommunications and responsible for the "networks group" at the Center of Excellence for Information and Communications Engineering (CEIIC) at Scuola Superiore Sant'Anna. He is also Director of the CNIT National Photonic Networks Laboratory. The scientific activity has covered mainly the area of digital transmission, networks and systems both wired and wireless, services distribution, provisioning, protection and switching techniques for metro/core networks. He has authored more than 100 technical papers and 1 book.

Luca Valcarenghi, is currently Assistant Professor at the Scuola Superiore Sant'Anna of University Studies and Doctoral Research of Pisa, Italy. His main research interests are Optical Networks design, analysis, and optimization; Artificial Intelligence optimization techniques; Communication Networks reliability; IP over WDM networking; QoS in Grid networking

Isabella Cerutti, holds a Laurea Degree (1998) in Electronics Engineering from the Politecnico di Torino, Italy and a Ph.D. (2002) in Electrical Engineering with major in Telecommunications from the University of Texas at Dallas. From 2002 to 2005, she worked as a Research Associate at the University of Texas at Dallas. In September 2005 she joined Scuola Superiore Sant'Anna. Her research interests include planning, optimization, performance evaluation, and protocol design of wireless and optical networks.

Barbara Martini, Fabio Baroncelli, Senior Researchers

Nicola Andriolli, Alessio Giorgetti, Post-doctoral Researchers

Nicola Sambo, Francesco, Paolucci, Valerio Martini, Ph.D. Students