INSTITUTE OF COMMUNICATION, INFORMATION AND PERCEPTION TECHNOLOGIES

Sant'Anna
School of Advanced Studies – Pisa

PIXNET

OPTICAL INTERCONNECT NETWORKS

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Introduction to Optical Interconnect Networks **15 July – 2 pm**

Elastic Optical Networks **15 July – 2 pm**

Data Center Networks **19 July – 4 pm**

Photonic Switches in Data Center Networks **20 July – 4 pm**

Abstract:
The performance of computer systems increases with a factor of 1000 every 10 years and the performance of CPUs with a factor 100 every ten years. This scaling is the result of massive parallelism in computers and leads to a network communication problem. Optical interconnect networks are emerging as a key technology in this interdisciplinary area, covering communications networks through to semiconductor nanophysics. Networking topics will cover how trends in cloud computing, supercomputing, mobile computing are defining today's and tomorrow's interconnection networks. Where optical interconnection is and will be important. How bandwidth and energy have become limiting factors for communication networks. Progress in optoelectronic integration and fabrication will finally be discussed.

Short bio:
Nicola Calabretta received the M.Sc. degree in telecommunications engineering from Politecnico di Torino, Turin, Italy, in 1999. In 2004 he received the Ph.D. degree from the Eindhoven University of Technology (TU/e), The Netherlands. From 2004 to 2007 he was with Scuola Superiore Sant'Anna University, Pisa, Italy. In 2007 he worked as PostDoc at the Technical University of Denmark. He is currently working as Associate Professor at TU/e. He has been participated to several EU projects and co-authored over 400 journal papers and conference proceedings and holds 7 international patents. His fields of interest are 5G and cloud computing, high performance optical networks for telecom and datacom, photonic integrated optical switches. He is TPC member of several international conferences.

Please, send a request of participation to pixnet@santannapisa.it in order to receive the link to the seminar sessions.

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Seminars will be held within the framework of the Photonic Integrated Circuits, Sensors and Networks (PIXNET) Erasmus Mundus Joint Master Degree