



University of Pavia
Ph.D. School in Microelectronics

SEMINAR

FIBER BASED PLATFORM FOR BIOSENSING

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Remarkable developments and improvement have been observed in the field of optical fiber-based sensors in the last decade, for physic, chemical and biological applications. Many new sensors for specific analytes have been reported, novel sensing chemistries or transduction principles have been introduced, and applications in various fields have been realized. This boost has been pushed also by the mature fabrication technology of photonic crystal fibers whose peculiar properties well fit requirement for efficient sensing systems. Discussions on the main issues related to the use of optical fibers in biosensing applications is reported with description of fiber functionalization for the detection of biologically relevant analytes and DNA.

Bio: Stefano Selleri, IEEE Senior Member, is Associate Professor at Information Engineering Department, Parma University. His current research includes optical amplification, fiber lasers, integrated optics, nonlinear optics and fiber sensors. He has been recently involved in the development of biosensors for the detection of DNA and genetic diseases by exploiting properties of standard and photonic crystal optical fibers.

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