

Cosimo Trono graduated in Physics from the University of Florence in 10 October 1998, and obtained the PhD from the University of Florence in 14 July 2003. Since 1998 he joined the Fibre Optics Group at the Institute of Electromagnetic Wave of CNR in Florence (now named Institute of Applied Physics "Nello Carrara"), with temporary contracts.

His research activity was devoted to the design and development of optical sensors and to the study of novel optical methods for sensing. He has been actively involved in several measurement campaigns, designing and developing the Bragg grating based probes and contributing to the plan of the measurement methodology. Examples of that are application to the cultural heritage with a monitoring campaign of wooden works of art, application to building and wide structures, applications to mechanical engineering with the measurement of deformation of critical components of vehicles. He actively collaborated with Pisa University in the design of static and dynamic pressure sensors based on single mode fibre laser, developing in the CNR-IFAC laboratories the technique for the realization of single mode erbium doped fibre lasers. Recently he has become active in the field of optical sensors for chemical and biochemical parameters with applications to the biomedical field, and in the field of the microfluidic device development and their integration into detection optoelectronic devices.

He has been the prominent actor in the following research lines: design and development of a fibre optics based sensor for the monitoring of the illumination into the museum environment (the sensor was patented in Italy, Europe and USA); design and development a workstation for the realization and characterization of fiber Bragg gratings (FBGs), long period gratings (LPGs) and fiber lasers for sensing applications; design and development of a prototype of thermostated fluidic system for LPG based assay development; design and development of a Point of Care instrument for the detection of biochemical parameters of clinical interest; design and development of an optoelectronic workstation for conventional fluorescence detection and for time-resolved lifetime fluorescence detection. He is holder of international patents and author of more than forty publications in International Journals and in International Conference Proceedings.