

Kolloquium

Am **Dienstag**, dem **13. Juni 2017**, um **14:00 Uhr** hält

Prof. Dr. Andrea Di Donato
Università Politecnica delle Marche/ Ancona, Italien

einen Vortrag mit dem Titel

Scanning probe microscopy at microwave and infrared wavelengths

Der Vortrag findet im A1-3-330 statt.

Abstract:

The talk will review the features of some novel techniques in the field of Scanning Microscopy, in which is constantly growing the need for innovative and accurate imaging/spectroscopic methods. In particular, Scanning Microwave Microscopy (SMM) and Near Infrared Scanning Microscopy, based on extrinsic Fabry-Perot optical cavity, will be discussed. The former offers the advantage to achieve nanometric resolution, both on inorganic and organic samples, whereas the latter combines the high sensitivity of the extrinsic micro-cavity with the features of a low coherence source to achieve quantitative phase imaging. The SMM system is integrated in a Scanning Tunneling Microscope, while Near Infrared Microscope is totally realized in optical fiber in order to have a compact and lens-free system.

Brief biography:

Dr. Andrea Di Donato is Assistant Professor at Polytechnic University of Marche. He graduated in Electronic Engineering from University of Ancona in 2000, and completed the Ph.D. in Electromagnetics (2004) at Polytechnic University of Marche. From 2003 to 2007 he was involved in different research fellowships in Electromagnetics regarding Microwave and Optical wave interaction inside anisotropic waveguides. In 2007 he was working with Somacis Spa company on the analysis and characterization of Polymeric Optical Printed Circuit Boards. Since 2010 he was appointed as Assistant Professor at Polytechnic University of Marche and since 2016 as Research Scholar at Harvard School of Engineering and Applied Sciences. In 2014 he founded the start-up Micro&Nano Lab, a company whose main activity was related to development of novel techniques and imaging systems in scanning microscopy. His latest research interest focuses on development of novel techniques applied to scanning microscopy, in particular he was recently involved in Scanning Microwave Microscopy and Near Infrared Scanning Microscopy for high sensitive quantitative phase-imaging.

Eingeladen von: Prof. Dr. Sergej Fatikow

Weitere Kolloquiumstermine sind im WWW abrufbar.