



Cesare Pini

Institute of Semiconductors and Microsystems

Technische Universität Dresden

**μ CHEMS - Towards Microchemomechanical
Microfluidic Systems**

Martedì 7 gennaio, 10:00

Sala Wataghin, Dipartimento di Fisica, via P. Giuria 1, Torino

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Abstract

The research field of microfluidics deals with the development of technologies for the transport and the processing of fluids in microchannels, thus allowing for lower consumption rates and higher parallelisation degree. Our research group develops new concepts for microfluidic systems based on polymers, whose properties enable us to integrate the actuating, sensing and processing systems on the microfluidic chip, thus avoiding the need for ancillaries.

In this talk I will cover the main activities of the group and will particularly focus on those systems realised with intrinsically active polymers, which can respond to different chemical stimuli and can be integrated as active components in the microfluidic circuits. The final part will be an overview of how intrinsically active polymers and microfluidics can be combined in order to provide a higher degree of integration within the microfluidic circuits.

The speaker



Cesare Pini completed his MSc in Mechanical Engineering at the Politecnico di Torino in 2012 with a Thesis in the field of microfluidics in collaboration with the Center of Smart Interfaces of the TU Darmstadt. Currently, he works as scientific associate and PhD student at the Chair of Polymeric Microsystems at the TU Dresden, where he deals with the design, fabrication and characterisation of integrated microfluidics systems. His activities are carried within the “Center for Advancing Electronics Dresden (cfaED)” cluster of excellence.