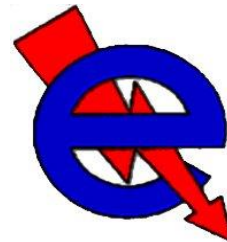


**Dziekan
WYDZIAŁU ELEKTRYCZNEGO
POLITECHNIKI CZĘSTOCHOWSKIEJ**



zaprasza

**20 września 2017 roku o godzinie 13.00
do Auli Wydziału Elektrycznego na**

Seminarium naukowe Wydziału Elektrycznego, na którym
dr Pietro Mandracci z Politecnico di Torino (Department of Applied
Science and Technology – Materials and Microsystems lab.)
przedstawi wykład pt.:

**„Plasma – assisted synthesis of silicon – based
materials of different composition and structure”**

In this presentation, the most recent research activities carried out at the *Materials and Microsystems Laboratory (ChiLab)* of *Politecnico di Torino* in the field of plasma-assisted synthesis of silicon-based thin-film materials and their application, are reviewed. The main plasma-assisted techniques used for the material synthesis, namely *plasma enhanced chemical vapor deposition (PECVD)*, *electron cyclotron resonance chemical vapor deposition (ECR_CVD)*, as well as *reactive magnetron sputtering*, are described, analyzing the characteristics that make them especially suitable for the production of silicon-based materials with a very wide range of compositions and physical properties. Moreover, some examples of silicon-based thin-film materials and structures grown by these techniques are presented, including amorphous thin film alloys such as $a\text{-SiO}_x$, $a\text{-SiN}_x$, $a\text{-SiO}_x\text{N}_y\text{:H}$, $a\text{-SiO}_x\text{C}_y\text{:H}$, $a\text{-SiC}_x\text{O}_y\text{N}_z\text{:H}$, microcrystalline Si, microcrystalline SiC and mixed phase mc-Si/a-SiC.

Dr hab. Katarzyna Oźga, prof. PCz
Dziekan Wydziału Elektrycznego
Politechniki Częstochowskiej