WP 3: Enhancement of IF PAN human resources through recruitment of experienced researchers and trainings
Task 3.6: Recruitment of the experienced researcher in the field of e-beam lithography & low temperature measurements (DC, AC and microwaves)

Dr. Marek Foltyn

Research Associate in Group of Laboratory of Cryogenic and Spintronic Research

Holds the position from 18.11.2013

EDUCATION

2003-2008 Warsaw University of Technology, Faculty of the Physics, PhD (with distinction),
2001-2002 University of Jyväskylä, Finlandia, Faculty of Mathematics and Natural Sciences (one term),
2000-2006 Cardinal Stefan Wyszynski University, Faculty of Theology,
1998-2003 Warsaw University of Technology, Faculty of the Physics, M.Sc. (with distinction),

WORK EXPERIENCE

2011-2013 Lead Engineer at General Electric Company Poland – CF6-80C2 & E1 engines physic based thermal & flow models building. Field issues supporting.
2007-2011 Design Engineer at Warsaw Institute of Aviation (EDC) - Thermal analysis and support for secondary flow cooling system design in General Electric aircraft engines.
2003-2008 PhD: Electrical properties and microstructure of glassy-crystalline Ag^+ - ion conducting composites synthesized by a high-pressure method. Materials were characterized by Differential Scanning Calorimetry (DSC), X-ray diffractometry (XRD), Impedance Spectroscopy (IS) in the range of 70-700K.
2002-2004 Investigations of electrical and electrochemical properties of the Bosch NOx sensors based on polycrystalline zirconia oxide stabilized by yttrium (European Union's 5^{th} Framework Programme).
2001-2002 Investigation of SINIS nanostructures (two NIS junctions: Metal-Insulator-Superconductor) by scanning electron microscopy. The project was performed at Jyväskylän University in Finland.

In frame of EAgLE project Dr. Marek Foltyn will be studying properties of magnetic structures (like diluted magnetic semiconductors - (Ga,Mn)As, (Ga,Mn)N) with superconducting devices (Josephson Junction, SQUIDs). He will define devices with e-beam lithography and will perform low temperature measurements involving DC & AC techniques. One of crucial aims is to support investigations on nanometer sized SQUID loops tested for switching currents – new promising trend observed in magnetometry.