



# PhD Conference of the Doctoral School for Physics

Faculty of Natural Sciences  
Budapest University of Technology and Economics,  
The conference is organized in the framework of *TÁMOP-4.2.2/B-10/1-2010-0009*

Friday, 17 May 2013

THE LANGUAGE OF THE CONFERENCE IS HUNGARIAN AND ENGLISH

## PROGRAM

<b>Session A.</b> <b>Room: R. building R215</b> <b>Chairman: Csaba Sükösd</b>	<b>Session B</b> <b>Room: R building R214</b> <b>Chairman: László Szunyogh</b>
8:30 Opening ( <i>Csaba Sükösd</i> )	8:30 Opening ( <i>László Szunyogh</i> )
8:35 Signal optimization of contrast enhanced GRE sequences using a 1 T permanent-magnet high homogeneity MRI system ( <i>Noémi Kovács</i> )	8:35 Enhancing resilience in interdependent networks ( <i>Marcell Stippinger</i> )
9:05 Determination of chemical state of the arsenic in plant samples by XANES ( <i>Anita Gerényi</i> )	9:05 Ab initio spin dynamics: application to a linear ferromagnetic chain ( <i>Levente Rózsa</i> )
9:30 Study of hydrogen permeation through polymer membranes ( <i>Béla Sebők</i> )	9:30 Magnetic anisotropy in frustrated clusters and monolayers ( <i>László Balogh</i> )
9:55 Modelling optical properties of nanoparticles in multilayer systems ( <i>Tibor Gál</i> )	9:55 Magnetic correlations in an Fe monolayer on Rh(001) ( <i>András Deák</i> )
10:20 Engineering of semiconductor biomarkers by means of first principles methods ( <i>Bálint Somogyi</i> )	10:20 Efficient orbital dependent STM simulation model ( <i>Gábor Mándi</i> )
10:45 First simulational and experimental test of a new SiPM based PET detector module ( <i>Judit Lantos</i> )	10:45 Study on the applicability of thorium as fuel in Generation IV reactors ( <i>Hunor György</i> )
11:10 Characterization of PET detector modules using UV excitation ( <i>Balázs Játékos</i> )	11:10 <b>LUNCH BREAK</b>
<b>11:35 LUNCH BREAK</b>	

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13:00 CFD analysis of flow field in L-STAR facility ( <i>Gábor Matulik</i> )	13:00 Precursor configurations and post-rupture evolution of single-molecule junctions revealed by correlation analysis ( <i>Zoltán Balogh</i> )
13:25 Radiation shielding calculations of APD camera for KSTAR tokamak ( <i>Gábor Náfrádi</i> )	13:25 Zero bias anomalies in single-atom contacts ( <i>László Pósa</i> )
13:50 Measurements with the final KSTAR BES diagnostic system ( <i>Máté Lampert</i> )	13:50 Magneto-optical diagnosis of malaria ( <i>Ádám Butykai</i> )
14:15 Fast ion loss measurements at the ASDEX Upgrade tokamak ( <i>Nóra Lazányi</i> )	14:15 Engineering InAs NW based Cooper pair splitter devices ( <i>Gergő Fülöp</i> )
14:40 The efficiency of the Radosys MN Series automatic micronucleus counter software and the concepts of further development ( <i>Timea Hülber</i> )	14:40 Detecting split Cooper pairs at the single electron level ( <i>Zoltán Scherübl</i> )
15:05 Dosimetric comparison of different techniques in external accelerated partial breast irradiation ( <i>Gábor Stelczer</i> )	15:05 Dosimetrical effects of different source arrangements in permanent prostate brachytherapy ( <i>András Herein</i> )
15:30 Respiratory gated CT imaging and radiotherapy at the National Institute of Oncology - technical aspects ( <i>Tamás Pócza</i> )	15:30 <b>CLOSING</b>
<b>15:55 CLOSING</b>	