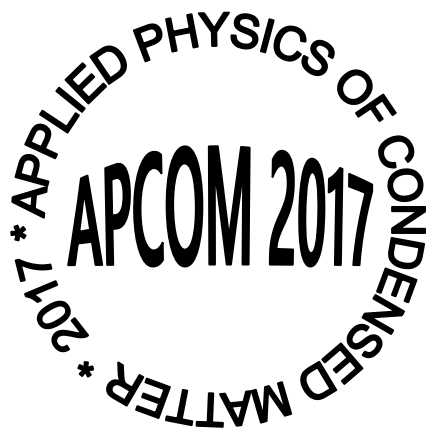


- INSTITUTE OF NUCLEAR AND PHYSICAL ENGINEERING, FACULTY OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY, SLOVAK UNIVERSITY OF TECHNOLOGY, BRATISLAVA • ALUMNI CLUB OF THE FACULTY OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY, SLOVAK UNIVERSITY OF TECHNOLOGY, BRATISLAVA
- INSTITUTE OF AUREL STODOLA, FACULTY OF ELECTRICAL ENGINEERING, UNIVERSITY OF ŽILINA, ŽILINA • INSTITUTE OF PHYSICS, SLOVAK ACADEMY OF SCIENCES, BRATISLAVA
- SLOVAK PHYSICAL SOCIETY, BRATISLAVA



# PROCEEDINGS

of the 23<sup>rd</sup> International Conference on  
**APPLIED PHYSICS OF CONDENSED MATTER (APCOM 2017)**

*June 12 – 14, 2017*

Hotel Patria, Štrbské Pleso, Slovak Republic

*All contributions published in this Conference Proceedings were reviewed by  
two members of the International Program Committee*

*Partner:*

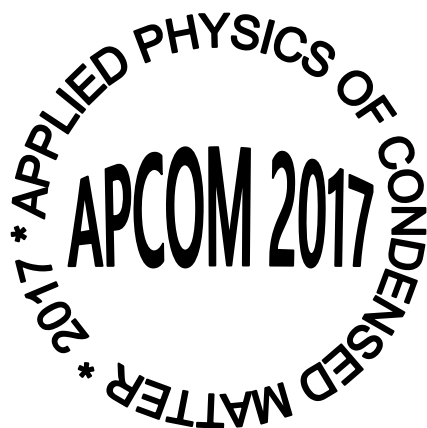


NURECO o.z.

## EDITORS

J. Vajda, I. Jamnický

ISBN 978-80-227-4699-1



23<sup>rd</sup> International Conference on  
**APPLIED PHYSICS OF CONDENSED MATTER (APCOM 2017)**

June 12 – 14, 2017

Hotel Patria, Štrbské Pleso, Slovak Republic

**INTERNATIONAL PROGRAM COMMITTEE**

**J. Sitek**, FEEIT SUT Bratislava, SK -  
chairman  
P. Ballo, FEEIT SUT Bratislava, SK  
J. Cirák, FEEIT SUT Bratislava, SK  
M. Flaska, PSU Pennsylvania, USA  
L.Harmatha, FEEIT SUT Bratislava, SK  
Z. J. Horváth, HAS Budapest, HU  
K. Hricovini, CPU Cergy-Pontoise, FR  
E. Hristoforou, NTU Athens, GR  
J. Kohout, CU Prague, CZ  
A. Lančok, IP AS Prague, CZ  
V. Lisý, FEEIT TU Košice, SK  
R. Makhloufi, Caen University, FR  
J. Müllerová, FEE Žilina University, SK  
W. Recheis, UAS Wiener Neustadt, AT  
D. Seyringer, FHV Dornbirn, AT  
O. Schneeweiss, IPM AS, Brno, CZ  
B. Šopko, CUT Prague, CZ  
P. Švec, IP SAS Bratislava, SK  
R. Szewczyk, WUT Warsaw, PL

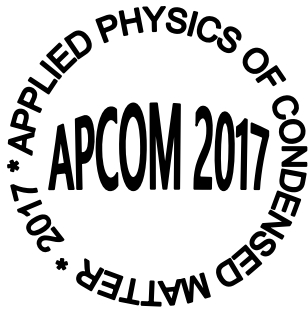
**LOCAL ORGANIZING COMMITTEE**

**J. Vajda**, FEEIT SUT Bratislava, SK -  
chairman  
I. Jamnický, FEE Žilina University, SK  
P. Novák, FEEIT SUT Bratislava

**CONFERENCE ADMINISTRATOR**

**Patrik Novák**  
Institute of Nuclear and Physical  
Engineering  
Faculty of Electrical Engineering and  
Information Technology, SUT Bratislava  
Ilkovičova 3  
812 19 Bratislava  
Slovak Republic

Tel.: +421-2-602 91 714  
Email: [apcom@elf.stuba.sk](mailto:apcom@elf.stuba.sk)  
Web: <http://kf.elf.stuba.sk/~apcom/>



The 23<sup>rd</sup> International Conference on

## **APPLIED PHYSICS OF CONDENSED MATTER 2017**

is the 23<sup>rd</sup> international conference in the series of events started in the year 1995 with the workshop "Solid State Physics and Radioactive Irradiation". Next three years the name of this workshop was „Effect of Non–Standard External Factors on Physical Properties of Solids“. Since 1999, its name was transformed to current name "Applied **P**hysics of **C**ondensed **M**atter" (APCOM). APCOM provides an unique opportunity for experts in the field of applied physical research of condensed matter to come together and share their visions of future development and in the area of application of devices for example in electrical and nuclear power engineering, electronic and optical communication etc. The main focus of the conference is on presentation of both theoretical and experimental results, partly also of both computer simulation results and specific measurements techniques in the investigation of physical properties and structure of bulk solids and structures, thin solid films, ultrathin organic polymer films, micro- and nanostructures *etc.*, exposed to the influence of the wide-range specific external factors (electrical, magnetic, thermal, high-frequency electromagnetic waves, optical and ionized radiation, ion and elementary particles beams and so on).

## **Main content areas:**

- 1. New materials and structures (incl. nanostructures and thin films), their analysis and specific applications*
- 2. Physical properties and structural aspects of solid materials and their influencing*
- 3. Optical phenomena in materials, photovoltaics and photonics, new principles in sensors, and detection methods, applied optics and optical communications*
- 4. Nuclear science and technology (with emphasis on the influence of irradiation on physical properties of materials and radiation detection)*
- 5. Computational physics and theory of physical properties of matter*
- 6. Biophysics and interdisciplinary physics of condensed matter*

## **List of reviewers:**

- J. Sitek, FEEIT SUT Bratislava, SK
- J. Cirák, FEEIT SUT Bratislava, SK
- P. Ballo, FEEIT SUT Bratislava, SK
- L. Harmatha, FEEIT SUT Bratislava, SK
- K. Hricovini, CPU Cergy-Pontoise, FR
- A. Lančok, IP AS Prague, CZ
- J. Müllerová, FEE Žilina University, SK
- D. Seyringer, FHV Dornbirn, AT
- B. Sopko, CUT Prague, CZ
- P. Švec, IP SAS Bratislava, SK
- I. Jamnický, FEE Žilina University, SK
- J. Vajda, FEEIT SUT Bratislava, SK