

**conferenceseries.com**

2<sup>nd</sup> International Conference and Exhibition on

# **Mesoscopic and Condensed Matter Physics**

October 26-28, 2016 Chicago, Illinois, USA

---

## **Scientific Program**

08:00-08:30 Registrations

Hall

conferenceseries.com

08:30-08:55

# Opening Ceremony

## Keynote Forum

08:55-09:00 Introduction

9:00-9:30

**Title: In-situ electron paramagnetic resonance studies of paramagnetic point defects in superconducting microwave resonators**

**Nathan Newman**, Arizona State University, USA

9:30-10:00

**Title: Photonic applications with a protein complex**

**D V G L N Rao**, University of Massachusetts, USA

10:00-10:30

**Title: Theory of thermal expansion of magnetic superconductors**

**Rikio Konno**, Kindai University Technical College, Japan

Networking & Refreshment Break 10:30-10:50

Sessions:

**Condensed Matter Physics | Bio-Physics and New Dimension in Technology | Statistical Mechanics of Condensed Matter Systems**

**Session Chair: Himanshu Verma**, University of South Florida, USA

**Session Co-chair: Igor Tralle**, University of Rzeszow, Poland

Session Introduction

10:50-11:10

**Title: Scanning tunneling microscopy across a superconductor/topological insulator interface**

**Stuart Tessmer**, Michigan State University, USA

11:10-11:30

**Title: Braiding of majorana fermions and topological quantum computation**

**Louis H Kauffman**, University of Illinois at Chicago, USA

11:30-11:50

**Title: Electronic and magnetic behaviors of 2D atom-thin layers: Graphene, black phosphorus, hexagonal boron-nitride and MoS<sub>2</sub>**

**Junji Haruyama**, Aoyama Gakuin University, Japan

11:50-12:10

**Title: Quantum entanglement in electron ballistic transport and jaynes-cummings model**

**Igor Tralle**, University of Rzeszow, Poland

12:10-12:30

**Title: Mott-insulators vs. bipolaronic insulators in a deformable lattice and their transitions to metallic ground states by tuning the deformation potential**

**Gayan Prasad Hettiarachchi**, Osaka University, Japan

12:30-12:50

**Title: The phase transition in cerium metal studied by an LDA + Gutzwiller method**

**Haifeng Song**, Institute of Applied Physics and Computational Mathematics, China

12:50-13:10

**Title: Melting and transport properties of aluminium at high pressure from ab initio molecular dynamics simulations**

**S C Wang**, Institute of Applied Physics and Computational Mathematics, China

Lunch Break 13:10-14:00

14:00-14:20

**Title: The properties of  $\alpha$  and  $\beta$ -UH<sub>3</sub> under extreme conditions (stretching and compressing strains): An ab initio study**

**Hongzhou Song**, Institute of Applied Physics and Computational Mathematics, People's Republic of China

Panel Discussion

Sessions:

**Solid State Physics and Crystallography | Quantum Physics in Condensed Matter and Mesoscopic Physics**

**Session Chair: C S Ting, University of Houston, USA**

**Session Co-chair: Rita John, University of Madras, India**

- 14:20-14:40** Title: **Novel electronic properties of hydrogenated grapheme: The first principles calculations**  
C S Ting, University of Houston, USA
- 14:40-15:00** Title: **Theoretical investigation on 2D materials: graphene, silicene, germanene, and stanene**  
Rita John, University of Madras, India
- 15:00-15:20** Title: **The collective effect of magnetic holes of different dimensions in superparamagnetic continuum subjected to gradient magnetic field: A birefringence study**  
P M Trivedi, Bhavan's Sheth R A College of Science, India
- 15:20-15:40** Title: **Improved electrochromic performance of WO<sub>3</sub>/PPy thin films**  
Anamika Vitthal Kadam, D Y Patil College of Engineering and Technology, India
- 15:40-16:00** Title: **Topological quantum states visualized by ARPES: From topological kondo insulator to Weyl semimetal**  
Nan Xu, Paul Scherrer Institut, Switzerland

Networking and Refreshments 16:00-16:20

- 16:20-16:40** Title: **Numerical modeling of exciton-light coupling in quantum wells**  
Pavel Belov, Saint Petersburg State University, Russia
- 16:40-17:00** Title: **Quantum computation with fibonacci anyons**  
Claire Levaillant, University of California at Santa Barbara, USA
- 17:00-17:20** Title: **Study of radiation effects on photoelectric and luminescence parameters of two-barrier structures based on silicon**  
F P Abasov, Institute of Radiation Problems of NAS of Azerbaijan, Azerbaijan
- 17:20-17:40** Title: **The thermodynamic and optical properties of diamond: A first-principles study**  
Qili Zhang, Institute of Applied Physics and Computational Mathematics, China

### Video Presentation

- 17:40-18:00** Title: **Degeneracy and interference quantum effects in phase space distribution functions: Path integral approach**  
A S Larkin, Joint Institute for High Temperatures-RAS, Russia

### Panel Discussions

Day 2 October 27, 2016

### Hall

### Keynote Forum

- 08:45-09:15** Title: **Exploration of intermediate phases of matter on surfaces**  
Michael W Roth, Northern Kentucky University, USA
- 09:15-09:45** Title: **Topological phase transitions and a two-dimensional Weyl superconductor in a superconductor/half-metal heterostructure**  
C S Ting, University of Houston, USA

Session:

**Nano and Mesoscopic Scale**

**Session Chair: Elie. A Moujaes, Federal University of Rondonia, Brazil**

**Session Co-chair: Yuko Ichiyanagi, Yokohama National University, Japan**

Session Introduction

- 09:45-10:05** Title: **Fundamental mechanisms that determine the loss tangent and temperature coefficient of resonant frequency ( $\tau_f$ ) in modern microwave ceramic dielectrics**  
Nathan Newman, Arizona State University, USA
- 10:05-10:25** Title: **Strongly localized isoelectronic impurities for synthesizing novel semiconductor alloys**  
Kirstin Alberi, National Renewable Energy Laboratory, USA

10:25-10:45 **Title: Local structure analysis and biomedical applications of multifunctional magnetic nanoparticles**  
Yuko Ichiyanagi, Yokohama National University, Japan

Networking & Refreshment Break 10:45-11:05

11:05-11:25 **Title: Magnetization of ultrathin [Fe<sub>1-c</sub>Ni<sub>c</sub>]<sub>n</sub> alloy nanojunctions between Fe or Co leads using an EFT-MFT model**

Elie A Moujaes, Federal University of Rondonia, Brazil

11:25-11:45 **Title: Electronic structure of graphene wormhole and graphitic nanocone**

Jan Smotlacha, Joint Institute for Nuclear Research, Russia

11:45-12:05 **Title: Synthesis and characterization of Zn-substituted lithium cobalt ferrite using sol-gel autocombustion for a cathode material in lithium ion batteries**

Mukhtar Ahmad, COMSATS Institute of Information Technology, Pakistan

12:05-12:25 **Title: Transport properties of "man-made" crystalline: Semiconductor superlattice**

M Kofoworola Awodele, Ladoke Akintola University of Technology, Nigeria

12:25-12:45 **Title: Nanosensors based on single and multiple metal oxide nanostructures**

Tonezzer Matteo, The Istituto dei Materiali per l'Elettronica ed il Magnetismo-CNR, Trento, Italy

12:45-13:05 **Title: Enhancement of sensitivity in gas chemiresistors based on carbon nanotube surface functionalized with substituted phthalocyanines**

Anshul Kumar Sharma, Guru Nanak Dev University, India

Lunch Break 13:05-14:00

14:00-14:20 **Title: AFM controlled studies of nanoscale polymeric spheres on a Si substrate**

Himanshu Verma, University of South Florida, USA

14:20-14:40 **Title: Emission, structure and aging of silver doped ZnO nanorod films**

T V Torchynska, Instituto Politécnico Nacional, México

Panel Discussion

Session:

**Meta Materials and Magnetic Materials**

**Session Chair: Roberto Zivieri**, University of Ferrara, Italy

**Session Co-chair: Rikio Konno**, Kindai University Technical College, Japan

Session Introduction

14:40-15:00 **Title: 2D ferromagnetic nanostructures: A new class of metamaterials**

Roberto Zivieri, University of Ferrara, Italy

15:00-15:20 **Title: Theory of thermal expansion of heavy fermion systems**

Rikio Konno, Kindai University Technical College, Japan

15:20-15:40 **Title: New types of composite metamaterials**

Paweł Zięba, University of Rzeszow, Poland

Networking & Refreshment Break 15:40-16:00

16:00-16:20 **Title: Impact of CuZn on structural, morphological and magnetic properties of spinel nanocrystalline ferrites for variety of applications**

Majid Niaz Akhtar, COMSATS Institute of Information Technology, Pakistan

16:20-16:40 **Title: Titanium doped semiconductor microring laser on optical fibers**

Muhammad Maqbool, Ball State University, USA

Video Presentation

16:40-17:00 **Title: Large-scale Bose-Einstein condensation in a vapor of sodium atoms at normal temperature (T=343K)**

Pei Lin You, Guangdong Ocean University, China

Day 3 October 28, 2016

## Hall

Sessions:

**Superconductivity and Superfluidity | Organic Electronics | Theoretical and Experimental study of Soft Matter**

**Session Chair: Ranjan Chaudhury**, S N Bose National Center For Basic Sciences, India

**Session Co-chair: Myung Joon Han**, KAIST Institute for interdisciplinary research, Korea

Session Introduction

**09:30-09:50** **Title: The rich landscape of organic molecules on graphitic surfaces: What molecular dynamics shows**  
**Michael W Roth**, Northern Kentucky University, USA

**09:50-10:10** **Title: Reduced dimensionality and emerging material property in perovskite oxide superlattices: A first-principles study**

**Myung Joon Han**, Korea Advanced Institute of Science and Technology, Korea

**10:10-10:30** **Title: Spin superfluidity in the frustrated two-dimensional anisotropic XY model**

**Leonardo dos Santos Lima**, Centro Federal de Educação Tecnológica de Minas Gerais, Brazil

Networking & Refreshment Break 15:40-16:00

**10:50-11:10** **Title: Functional oxide nanoarchitectures for emerging energy and clinical technologies**

**Oomman K Varghese**, University of Houston, USA

**11:10-11:30** **Title: Effect of metal-ions (Sn and Li) doping on the structural, optical and gas sensing properties of  $\text{In}_2\text{O}_3$  nanocrystalline thin films**

**S N Pandey**, Motilal Nehru National Institute of Technology, India

**11:30-11:50** **Title: Local properties study of substituted Sr-Ca-Cu-O superconducting structure**

**A Sklyarova**, Nagaoka University of Technology, Japan

**11:50-12:10** **Title: Microscopic understanding of high temperature superconductivity and its possible role towards enhancement of critical temperature**

**Ranjan Chaudhury**, S N Bose National Center For Basic Sciences, India

**12:10-12:30** **Title: Dielectric relaxation study and molecular interaction of amides in 1, 4-dioxane by using time domain reflectometry**

**Gajanan Ramrao Mahajan**, Shri Datta Arts, Commerce and Science College, India

**12:30-12:50** **Title: Morphological studies of virgin and ion irradiated nanostructured BaF<sub>2</sub> thin films surfaces**

**S N Pandey**, Motilal Nehru National Institute of Technology, India

**12:50-13:10** **Title: Electron-phonon interaction in nanostructures at sub-Kelvin temperatures**

**Dragos Victor Anghel**, Institutul National de Cercetare-Dezvoltare pentru Fizica si Inginerie Nucleara Horia Hulubei, Romania

Lunch Break 13:10-14:00

Panel Discussion

**Bookmark your dates**

Awards and Closing Ceremony

3<sup>rd</sup> International Conference and Exhibition on

# Condensed Matter Physics and Materials

October 16-18, 2017 Atlanta, USA

4<sup>th</sup> International Conference and Exhibition on

# Theoretical and Condensed Matter Physics

November 6-7, 2017 Toronto, Canada

e-mail: [condensedmatter@physicsconferences.org](mailto:condensedmatter@physicsconferences.org); [condensedmatterphysics@conferenceseries.net](mailto:condensedmatterphysics@conferenceseries.net)

Website: [condensedmatterphysics.conferenceseries.com/](http://condensedmatterphysics.conferenceseries.com/)