



## Webinar Series on

# Advances in Condensed Matter Physics and Materials Science

29-30<sup>th</sup> September, 2021

**Organized by: School of Physical and Applied Sciences, Goa University**

The Scientific deliberations at the webinar series will cover a wide range of topics in Condensed Matter Physics and Materials Science in the form of invited talks. The webinar series is expected to be a platform for young researchers to hear from experts in various research domains of condensed matter physics and to widen their knowledge in the latest research advancements. This will also serve as an opportunity for exploring new collaborations.

### Topics Covered

- Shape memory alloys
- Quantum Magnetism
- Strongly correlated system
- Metal Chalcogenides
- Light-matter interaction @ nanoscale
- Neutron Scattering
- Topological Phases of Matter
- Energy Materials
- 1-D & 2-D materials
- Spintronic & Devices
- Amorphous Systems

### List of Speakers

Ibrahim Karaman, Texas A&M University, USA

Avinash Mahajan, IIT Bombay, India

Sugata Roy, IACS, Kolkata, India

Kanishka Biswas, JNCASR, Bangaluru, India

Eiji Nishibori, University of Tsukuba, Japan

Nonappa, Tampere University, Finland

Xavier Moya, University of Cambridge, UK

Romain Quidant, ETH Zurich, Switzerland

Mattias Eden, Stockholm University, Sweden

Riccardo Sapienza, Imperial College London, UK

Sunil Kumar, IIT, Delhi, India

G. V. Pavan Kumar, IISER, Pune, India

Vinod Aswal, BARC, Mumbai, India

Mukul Gupta, UGC DAE CSR, Indore, India

Anup K. Bera, BARC, Mumbai, India

Abhimanyu Rana, BML Munjal University, India

Kashinath Bogle, SRTM University, India

**spectroscopy** **properties**

**structure** **applications**

**Organizers**  
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**For online registration**  
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## September 29, 2021

9:40 am - 10:20 am	Avinash Mahajan	Unusual spin dynamics in the low-temperature magnetically ordered state of the honeycomb system Ag <sub>3</sub> LiIr <sub>2</sub> O <sub>6</sub>
10:20 am - 11:00 am	Sugata Ray	Mixed Anion Physics in Fluorinated vacancy ordered Brownmillerite: A possible route to Multiferrocity
11:00 am - 11:40 am	Kanishka Biswas	Enhanced atomic ordering leads to ultra-high thermoelectric performance
11:40 am - 12:20 pm	Eiji Nishibori	In-situ and charge density studies by synchrotron X-ray diffraction
Lunch Break		
2:00 pm - 2:40 pm	Kashinath Bogle	Metal oxide/sulfide nano-materials for electrical devices and waste-water treatment
2:40 pm - 3:20 pm	Nonappa	3D electron microscopy for structural nanotechnology
3:20 pm - 4:00 pm	Xavier Moya	Barocaloric effects near structural phase transitions
Tea Break		
4:10 pm - 4:50 pm	Romain Quidant	Nanophotonics for biosensing and reconfigurable planar optics
4:50 pm - 5:30 pm	Mattias Eden	Solid-State NMR and molecular dynamics simulation studies of phosphoserine-doped calcium phosphate cements with bone-adhesive properties

## September 30, 2021

9:00 am - 9:40 am	Ibrahim Karaman	Unusual Functionalities in Martensitically Transforming Materials
9:40 am - 10:20 am	G. V. Pavan kumar	Surface-enhanced Raman scattering in plasmonic tweezers
10:20 am - 11:00 am	Vinod Aswal	Probing structure and interaction in soft matter using small angle scattering
11:00 am - 11:40 am	Mukul Gupta	Synthesis of fcc-Co from isostructural Co <sub>4</sub> N
11:40 am - 12:20 pm	Anup Kumar Bera	Neutron scattering investigation of quantum phenomena in 1D magnets
Lunch Break		
2:30 pm - 3:10 pm	Abhimanyu Rana	Smart materials for sensors and transparent neuromorphic devices
3:10 pm - 3:50 pm	Sunil Kumar	Ultrafast spectroscopy of spintronic heterostructures
Tea Break		
4:00 pm - 4:40 pm	Riccardo Sapienza	Nanophotonic and electro-chemical control of individual quantum dot emission