

# Special session on Modeling and Simulation in Materials Science

## Introduction

Modeling and simulation across materials science session emphasizes fundamental materials issues advancing the understanding and prediction of material behaviour. It includes interdisciplinary research that tackles challenging and complex materials problems where the governing phenomena may span different scales of materials behaviour, with an emphasis on the development of quantitative approaches to explain and predict experimental observations. Material processing that advances the fundamental materials science and engineering underpinning the connection between processing and properties. This session will cover all classes of materials, and mechanical, microstructural, electronic, chemical, biological, and optical properties determined by *ab initio* and/or semi-empirical methods, e.g., quantum chemistry, density functional, tight binding and molecular dynamics.

## Speakers

- 1- **Prof. Dr. Iftikhar Ahmad**  
(Professor & Chairperson Department of Physics,  
University of Malakand, Pakistan · Upper Dir)
- 2- **Dr. Afaq Ahmad,**  
Center of Excellence in Solid State Physics,  
University of the Punjab, Lahore, Pakistan
- 3- **Dr. Sikandar Hayat**  
(International Islamic University, Islamabad).
- 4- **Dr. Altaf Hussain**  
(The Islamia University of Bahawalpur)
- 5- **Dr. Rana Muhammad Arif Khalil**  
(Bahauddin Zakariya University, Multan)

## Session Coordinators:

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