

Short Term Course (STC)

on

**Advanced Materials Processing and
Characterization Techniques
(AMPCT 2022)**

26th May – 30th May 2022

About NIT Hamirpur

National Institute of Technology Hamirpur is one of the thirty one NITs of the country, established in 1986 as Regional Engineering College, as a joint and cooperative enterprise of the Govt. of India and Govt. of Himachal Pradesh. The goals of the institute as embodied in the logo are truly remarkable in their scope of vision. The college provides Undergraduate, Postgraduate and Doctorate Education in Engineering, Sciences & Humanities, fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on research, both basic and applied.

**About Department of Materials Science and
Engineering**

The Department of Materials Science and Engineering (Formerly Centre for Materials Science) has evolved into one of the finest in terms of teaching curriculum and methodology supported by a well-organized and adequately funded research program. The Department has a very well-established B. Tech. program complemented by an M. Tech. program. Apart from this the department is well equipped with state of the art (sophisticated) processing and characterization equipments like Raman Spectroscope, FESEM, Atomic force microscope, Pulsed laser deposition, Twin jet extruder, Ball milling, FTIR and UV-Vis spectroscope.

Patron

Prof. H. M. Suryawanshi

Director

National Institute of Technology Hamirpur

Chairman

Prof. Ravi Kumar

Head

**Department of Materials Science and
Engineering**

Convener

Dr. Rita Maurya

Coordinators

Dr. Nitesh Kumar

Dr. Raj Bahadur Singh

**Organizing Committee, All faculty and Staff of
Department of Materials Science and
Engineering
NIT Hamirpur.**

Treasurer: Dr. Nitesh Kumar

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**An Initiative of
National Institute of Technology Hamirpur**



**Organized
by**

**Department of Materials Science and Engineering,
National Institute of Technology Hamirpur,
Hamirpur, Himachal Pradesh – 177 005, India
Phone: +91-1972-254380
Web: www.nith.ac.in**

List of Eminent Speakers

AMPCT 2022
NIT-Hamirpur



Department of
Materials Science
and Engineering,
NIT-Hamirpur,
Himachal Pradesh



Prof. V. S. Chouhan
IIT-Mandi



Prof. Viswanath B
IIT Mandi



Prof. Vishal Singh
NIT-Hamirpur



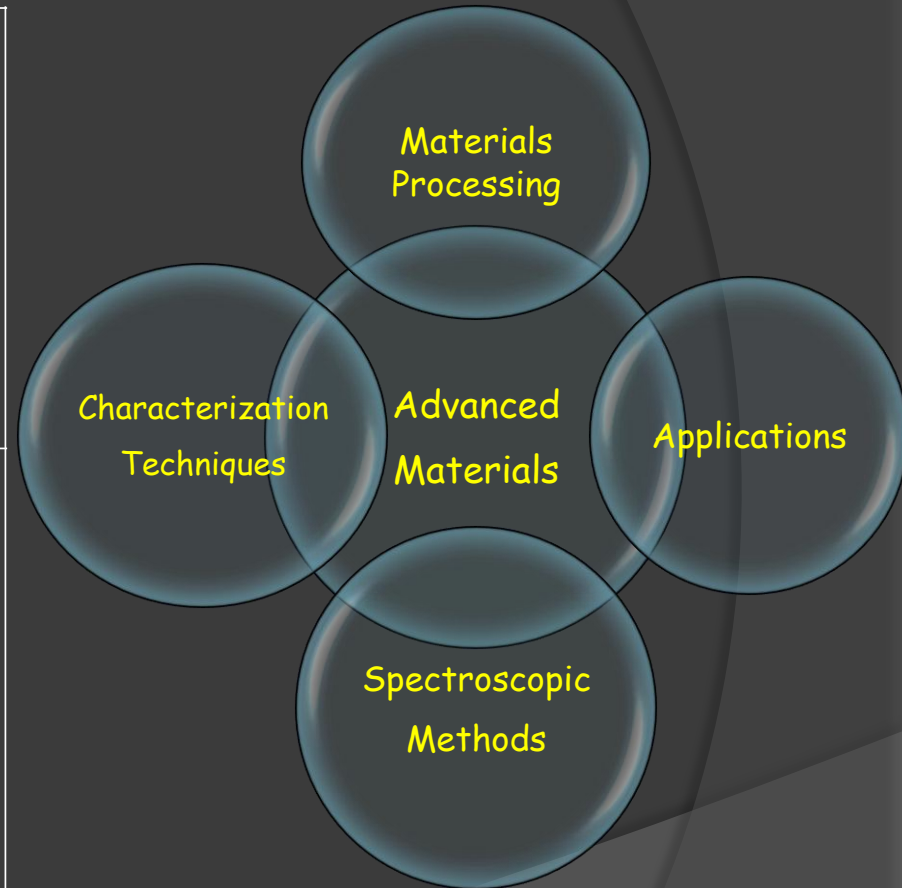
Prof. S. K. Arora
PU Chandigarh



Prof. Ravi Kumar
NIT-Hamirpur



Dr. D. K. Shukla
UGC-DAE, Indore



All the Participants will be exposed to theoretical fundamentals as well as hands on demonstration of the advanced materials processing and characterization tools

About Short Term Course

This short term course is in line to the theme of providing a platform to expose the participants to the current and future challenges with their possible solutions along with brushing up the fundamentals of advanced material processings and characterization aspects. Lectures, exhaustive discussion, mutual interaction and idea sharing will certainly open an avenue to take a leap in the direction of mitigating the ongoing and future industrial needs in scientific ways.

Objectives and Scope

Materials Processing and characterization is the key domain of Metallurgical, Materials and Mechanical Engineering. Quite often, the level of materials processing and characterization reflects the ability to adopt the new and upcoming industrial needs. Growth of a country primarily depends on the strength of developing new and advanced materials, which influence the automobile, aerospace, manufacturing and construction sectors. The prime objective of this workshop is to impart the comprehensive knowledge of advanced processing and characterization of metals and alloys along with special materials. This workshop will certainly unfold the three mutually dependent realms to cater the needs of metallurgical and materials industries and to enable the participants to address various upcoming issues and challenges related to materials and its processing and characterization

Topics to be Covered

- Polymer Processing
- Ceramic Processing and Characterization
- Optical and Electron Microscopy
- Raman and FTIR spectroscopy
- Atomic force microscopy
- XRD and Texture characterization
- Severe plastic deformation
- Electrodeposition
- Corrosion of metals and alloys
- XRF and XPS techniques
- EBSD
- Milling and extrusion processes

Resource Persons/Speakers Faculties/Experts from IITs, NITs, CSIR labs and other premier Institutions/Organizations will deliver the lectures.

Targeted Participants

Faculty from engineering institutes, universities, research scholars, UG/PG students, and other educational institutes and employees of the industries.

Number of Participants

Number of participants is limited for this workshop. Application will be accepted on *first-cum-first serve basis*.

Important Dates

Last date (Online Registration): 08-05-2022

Confirmation by E-mail: 10-05-2022

STC duration: 26-05-2022 to 30-05-2022

Registration Fee Details

- (a) Rs. 2000 for Academia/R&D Labs participants
- (b) Rs. 1000 for Students
- (c) Rs. 4000 for participants from Industry

Registration is compulsory for all the delegates. The registration fee is non-refundable. Fooding and lodging will be provided on payment basis other than registration fee.

How to Apply

- The interested candidates must deposit the registration fee through SBI collect with the following procedure
- Go to SBI collect and choose Himachal Pradesh as state of Institution and type of Institution as educational institute
- Choose NIT Hamirpur from Name of the Institutions and Select payment category as WORKSHOP FDP STC CONFERENCE

- Generate the payment slip and attach it with the registration form available at the following <https://docs.google.com/forms/d/e/1FAIpQLSds5c11Yn-N3KoJ96nTCiC3WMsmBYUK43TaPajW5qvRT9qCfA/viewform?vc=0&c=0&w=1&flr=0>

Certificate

Certificate will be provided to those registered participants whose minimum attendance is 75% of the program.