

Winter School - 2023

Hands on Training on Instrumentation and Analytical Techniques

for

Atmospheric Aerosol Measurements and Source Apportionment Studies

Lock the dates
20th - 25th
February
2023



Patron

Prof. Sanjeev Jain

Hon'ble Vice Chancellor
Central University of Jammu



Co-Patron

Prof. Sachchida N. Tripathi

National Coordinator, NKN, NCAP
IIT Kanpur

- Steps of offline Source Apportionment Methods
- Sampling and Gravimetry Analysis
- Sample preparation methods and Chemical analysis (carbonaceous species, organics, metals and water soluble ionic species)
- Post-analysis steps: Data curation and Receptor Modelling

Note:

Scan the QR code for registration/
nomination form

Last date:

28th January, 2023

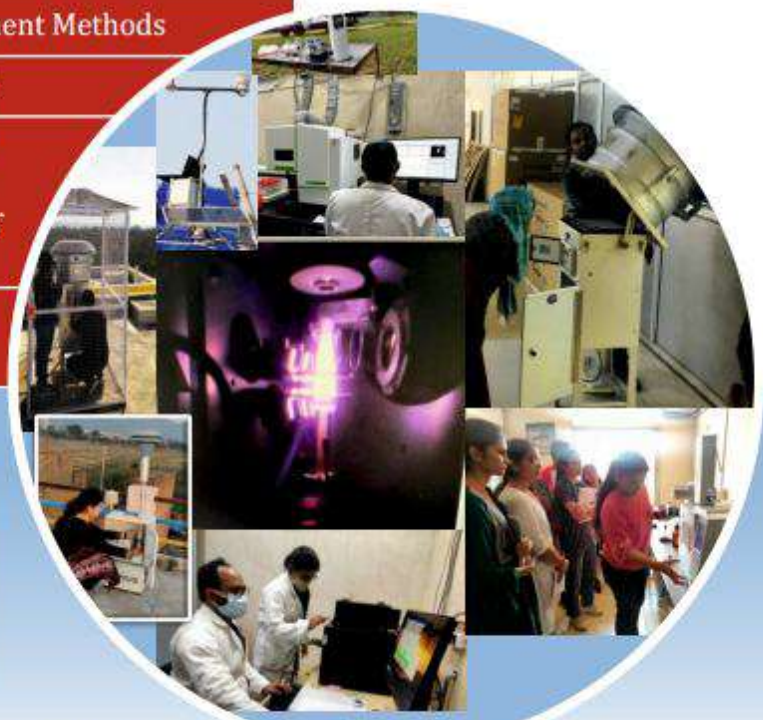


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<https://tinyurl.com/y2d9vybw>

For any query, please write to us on: hari.cuj@gmail.com

or Whatsapp on +91-8492936296



• Overview of Atmospheric Aerosol Measurements

• Satellite and Meteorological data analysis

• Dynamic Source Apportionment

• Air Quality and Weather Forecasting



Organized by
Central University of Jammu
(Institute of Repute under NCAP)
Under the aegis of
National Knowledge Network, NCAP



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HANDS ON TRAINING ON INSTRUMENTATION AND ANALYTICAL TECHNIQUES

FOR

ATMOSPHERIC AEROSOL MEASUREMENTS AND SOURCE APPORTIONMENT STUDIES

[20th – 25th February 2023]



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Department of Environmental Sciences

Central University of Jammu

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Course Chairs

Prof. Sunil Dhar
Head of Department
EVS

Prof. Deepak Pathania
Dean Research Studies
Prof., EVS

Course Co-Chair

Dr. Richa Kothari
Faculty, EVS

Course Convener

Dr. Shweta Yadav (Faculty, EVS)
[Nodal Faculty (J&K), NCAP and IoR Rep]

Course Co-Conveners

Lt. Dr. Pankaj Mehta
Faculty, EVS

Dr. Dinesh Kumar
Faculty, EVS



BACKGROUND

Air pollution is one of the most difficult challenges faced by our country today. India's commitment to clean and pollution free air is well reflected in the National Clean Air Programme (NCAP), launched in 2019 by the Ministry of Environment, Forest and Climate Change (MoEFCC). The focus is collaborative and participatory approach involving different stakeholders (from ministry to common people) to reduce air pollution in the country. Atmospheric aerosol measurements and source apportionment studies are important for understanding the sources of particulate matter, pollution outflow and large-scale regional impacts. Thus, SA studies are necessary to formulate and implement the mitigation and management plans for air quality improvement.

NATIONAL KNOWLEDGE NETWORK [NKN]

National Knowledge Network (NKN) and Institutes of Repute (IoRs) have been set up by MoEFCC for providing technical assistance and knowledge support at National, State and City level under NCAP for implementing action plans to improve the air quality. NKN has been formed with a vision to build local technical capacities in order to create a larger pool of institutes to support activities under NCAP. NKN also has objective to create adequate capacity in the States/UTs to support future air quality management efforts.

CENTRAL UNIVERSITY OF JAMMU [INSTITUTE OF REPUTE UNDER NCAP]

Central University of Jammu (CUJ) came into existence on August 08, 2011 by the Central Universities Act, 2009. CUJ is a centre of higher learning, integrating culture, knowledge, philosophy, science and value system of our heritage with modern and emerging skills, technology and management practices. CUJ entered into a tripartite Memorandum of Understanding with the MoEFCC and Jammu & Kashmir Pollution Control Committee (JKPCC) on 6 June 2019 to work together to combat air pollution and to meet objectives of the National Clean Air Programme (NCAP) in Jammu & Kashmir. CUJ has been designated as IoR under NCAP and is serving as technical partner to JKPCC.

HIMALAYAN AEROSOL RESEARCH INSTRUMENTATION (HARI) FACILITY (JOINT FACILITY OF CUJ & JKPC)

While we are striving to achieve the targets of National Clean Air Programme in India, the establishment of dedicated aerosol instrumentation facilities is essential. The Himalayan Region is unique in location, rich in biodiversity and is also a source of major river systems. The lack of relevant database and even preliminary knowledge on ambient aerosols from the North-Western Himalayan region limit our understanding of atmosphere of the Himalayan Region and constrain models used for long term assessment of climate variations. This instrumentation facility was setup to serve as a centre of knowledge creation and dissemination by augmenting the research capabilities of the region and by creating a pool of skilled manpower through in-house training programs.

VISION BEHIND THE WINTER SCHOOL

To meet the objectives of NCAP, chemical speciation and source apportionment studies are required to be conducted in all the non-attainment cities of India. Primary knowledge on chemical composition and methods of chemical speciation is important to identify sources of pollution. A pool of trained manpower is necessary to conduct/supervise such studies. This winter school is going to be a blend of in-class, theory based training and hands-on operational training. The primary focus will remain on the techniques used for chemical speciation and source apportionment of aerosols. The tutorials by eminent scientists will provide a clear understanding on the importance of a particular chemical component of aerosols alongwith details on stepwise method of analysis using instrumentation and analytical techniques. Hand on training on available equipment of aerosol sampling and analysis will give attendees a good understanding on methods.

PRIMARY OBJECTIVES OF THE WINTER SCHOOL

- ⇒ To provide conceptual knowledge on methods of chemical speciation and source apportionment of aerosols.
- ⇒ To impart hands on training on required instrumentation and analytical techniques for chemical speciation and source apportionment of aerosols.

⇒ To disseminate knowledge on post-analysis data interpretation, multivariate statistical tools, satellite and meteorological data analysis.

COURSE INSTRUCTORS

- ❖ Prof. Sachchida N. Tripathi, IIT Kanpur [National Coordinator, NKN, NCAP]
: snt@iitk.ac.in; <http://sntripathi.in/>
- ❖ Prof. Gufran Beig, NIAS, IISc, Bangalore
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- ❖ Prof. Jayant K. Tripathi, JNU, New Delhi
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- ❖ Prof. Neeraj Rastogi, PRL, Ahmedabad
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- ❖ Prof. Sagnik Dey, IIT Delhi
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- ❖ Prof. Sudesh Yadav, JNU, New Delhi
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- ❖ Dr. Vijay Kumar Soni, IMD [Member, NKN, NCAP]
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https://mausam.imd.gov.in/imd_latest/contents/environmental-monitoring-services.php
- ❖ Prof. Sachin S. Gunthe, IIT Madras [Member, NKN, NCAP]
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<https://civil.iitm.ac.in/faculty/sgunthe/>

SESSION THEMES

- ⇒ Overview of Atmospheric Aerosol Measurements
- ⇒ Steps of offline Source Apportionment Methods
- ⇒ Sampling and Gravimetry Analysis
- ⇒ Sample preparation methods and Chemical analysis (carbonaceous species, organics, metals and water soluble ionic species)
- ⇒ Post-analysis steps: Data curation and Receptor Modelling
- ⇒ Satellite and Meteorological data analysis
- ⇒ Dynamic Source Apportionment
- ⇒ Air Quality and Weather Forecasting

TARGET GROUP (MAXIMUM PARTICIPANTS:40)

- ❖ Scientists/officials/consultants of Pollution Control Boards/committees.
- ❖ Faculty/research scientists/consultants involved in aerosol studies.
- ❖ Limited seats for PhD scholars working on related problems.

REGISTRATION FEE

Rs. 3,000 (For PhD scholars);
Rs. 5,000 (For faculty/scientists)

IMPORTANT DATES

Deadline for nomination/registration:
28th January, 2023

Display of list of selected candidates:
31st January, 2023

Deadline for submission of Registration fee:
2nd February, 2023

CONTACT DETAILS

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Central University of Jammu,
District Samba, J&K UT-181143, India

For any query, please write to us on: hari.cuj@gmail.com
or Whatsapp on +91-8492936296

Note:

Scan the QR code for registration/nomination form or just click on <https://tinyurl.com/y2d9vybw>

