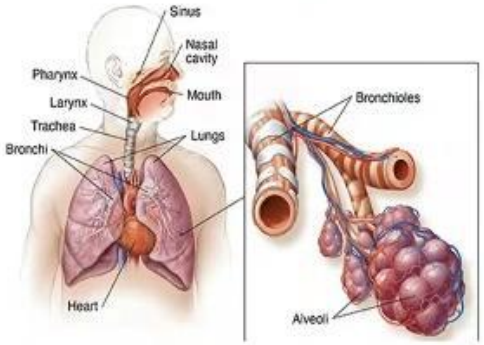
भगिनी निवेदिता कॉलेज में ‘कण प्रदूषण: दुष्प्रभाव और समाधान’ विषय पर राष्ट्रीय ई-संगोष्ठी आयोजित (30 जून 2026)

दिल्ली विश्वविद्यालय के भगिनी निवेदिता कॉलेज के ब्रह्मवादिनी भारतीय ज्ञान प्रणाली (IKSC) केन्द्र द्वारा व्याख्यानमाला के सातवें पुष्प के अंतर्गत “कण प्रदूषण: दुष्प्रभाव और समाधान” विषय पर एक दिवसीय राष्ट्रीय ई-संगोष्ठी का सफल आयोजन गूगल मीट के माध्यम से किया गया। कार्यक्रम की अध्यक्षता कॉलेज की प्राचार्या प्रोफेसर रूबी मिश्रा ने की। मुख्य वक्ता के रूप में डॉ. सुमित कुमार मिश्रा, एनपीएल (National Physical Laboratory) के वरिष्ठ वैज्ञानिक, ने कण प्रदूषण (Particulate Matter) के स्रोतों, वायु गुणवत्ता पर इसके प्रभाव, मानव स्वास्थ्य पर पड़ने वाले दुष्प्रभाव तथा प्रदूषण नियंत्रण के वैज्ञानिक एवं व्यावहारिक उपायों पर विस्तृत एवं तथ्यपरक व्याख्यान प्रस्तुत किया। उन्होंने उत्तर भारत में वायु प्रदूषण की वर्तमान स्थिति, $PM_{2.5}$ एवं PM_{10} के प्रभाव, शोध-आधारित निष्कर्षों तथा भारतीय ज्ञान परम्परा में वायु के महत्व पर भी प्रकाश डाला। ई-संगोष्ठी में देश के विभिन्न विश्वविद्यालयों एवं संस्थानों के शिक्षकों, शोधार्थियों तथा विद्यार्थियों ने सक्रिय सहभागिता की तथा प्रश्नोत्तर सत्र में विशेषज्ञ से अपने जिज्ञासाओं का समाधान प्राप्त किया। कार्यक्रम का समन्वयन प्रोफेसर सुषमा राणा ने किया। आयोजन समिति में डॉ. सीमा गुप्ता, डॉ. आशुतोष कुमार, सुश्री अंजू तथा श्री संजय कुमार तिवारी का महत्वपूर्ण योगदान रहा। कार्यक्रम का समापन धन्यवाद ज्ञापन के साथ हुआ।

National E-Seminar on “Particulate Pollution: Impacts and Solutions (June 30, 2026)

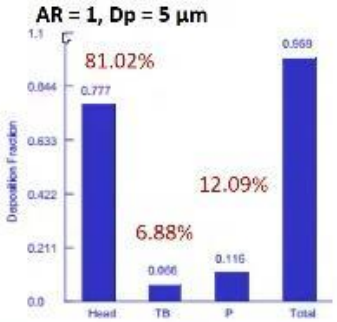
The Indian Knowledge Systems Centre (IKSC) – Brahmavadini of Bhagini Nivedita College, University of Delhi, successfully organised the seventh lecture of its lecture series in the form of a One-Day National E-Seminar on the theme “Particulate Pollution: Impacts and Solutions” through Google Meet. The programme was chaired by Prof. Ruby Mishra, Principal of Bhagini Nivedita College. The keynote lecture was delivered by Dr. Sumit Kumar Mishra, Scientist at the National Physical Laboratory (NPL), who presented an insightful talk on the sources of particulate matter, air quality issues, adverse health effects, and scientific strategies for pollution mitigation. He also discussed current air pollution challenges in North India, findings from his research on aerosols, and highlighted the significance of *Vayu* (air) in the Indian knowledge tradition. The seminar witnessed enthusiastic participation from faculty members, researchers, and students from various institutions across the country. An interactive question-and-answer session enabled participants to engage with the speaker and gain deeper insights into the subject. The programme was coordinated by Prof. Sushma Rana, while the organising committee comprising Dr. Seema Gupta, Dr. Ashutosh Kumar, Ms. Anju, and Mr. Sanjay Kumar Tiwari ensured the successful conduct of the event. The seminar concluded with a formal vote of thanks.

Deposition Potential of PM in New Delhi

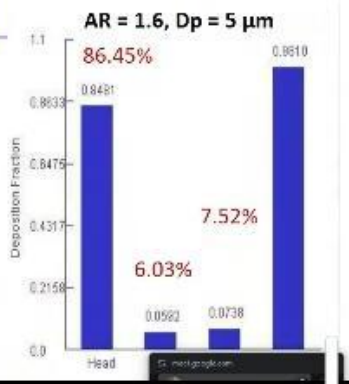


Respiratory system:

1. **Head airways** (nose, mouth, pharynx and larynx)- **Head**
2. **Tracheobronchial region** (trachea to the terminal bronchioles)- **TB**
3. **Pulmonary** (alveolar) region- **P**



Dr Sadaf Fatima,
Bihar Education Department,
India



Fatima, Mishra et al., 2022; Urban Climate

विकसित भारत अभियान
1947 TO 2047

भगिनी निवेदिता कॉलेज (दिल्ली विश्वविद्यालय)

ब्रह्मवादिनी भारतीय ज्ञान प्रणाली (IKSC) केन्द्र

व्याख्यान माला - सातवां पुष्प

एक दिवसीय राष्ट्रीय ई-संगोष्ठी

30 जून 2026 , 7:00 PM (IST)

अध्यक्षा
प्रोफेसर रूबी मिश्रा
प्राचार्या, भगिनी निवेदिता कॉलेज

वक्ता
डॉ. सुमित कुमार मिश्रा
एनपीएल वैज्ञानिक

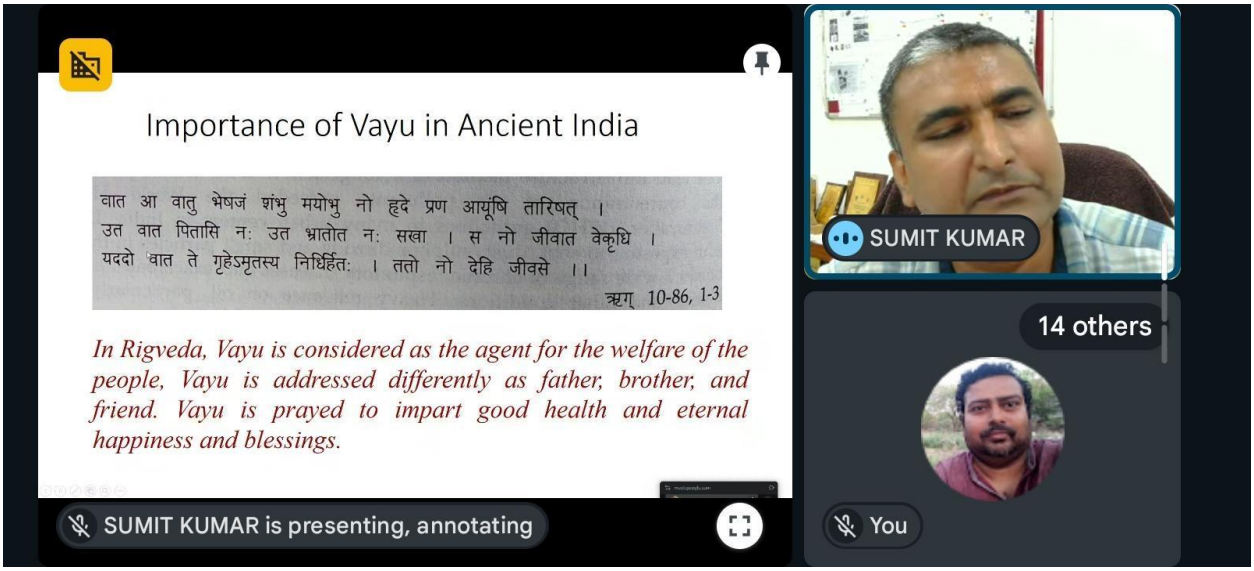
विषय

कण प्रदूषण: दुष्प्रभाव और समाधान

Join Through link:https://meet.google.com/kzm-enfw-dng

समन्वयक
प्रोफेसर सुषमा राणा

आयोजक मंडल
डॉ. सीमा गुप्ता, डॉ. आशुतोष कुमार
सुश्री अंजू, श्री संजय कुमार तिवारी


Importance of Vayu in Ancient India
वात आ वातु भेषजं शंभु मयोभु नो हृदे प्रण आयूंषि तारिषत् ।
उत वात पितासि नः उत भ्रातोत नः सखा । स नो जीवात वेकृधि ।
यददो वात ते गृहेऽमृतस्य निर्धितः । ततो नो देहि जीवसे ।।
ऋग् 10-86, 1-3
In Rigveda, Vayu is considered as the agent for the welfare of the people, Vayu is addressed differently as father, brother, and friend. Vayu is prayed to impart good health and eternal happiness and blessings.
SUMIT KUMAR is presenting, annotating
SUMIT KUMAR
14 others
You

Air quality issues in North India

- *Uncertainties associated with their predictions*
- *Severe effects on human health*

SUMIT KUMAR is presenting, annotatir

Visitor

N Nirmal Rana
Visitor

p physics unravelled kn...
Visitor

P Prabjot Kour
Visitor

 pratima dagar
Visitor

 Sanjay Tiwari
Visitor

 Santosh kumar Jha
Visitor

 SUMIT KUMAR Mishra
Visitor

 SUMIT KUMAR Mishra ...

Acknowledgements

अध्यक्षा
प्रोफेसर रूबी मिश्रा
प्राचार्या, भगिनी निवेदिता कॉलेज

प्रोफेसर सुषमा राणा

डॉ. सीमा गुप्ता, डॉ. आशुतोष कुमार
सुश्री अंजू, श्री संजय कुमार तिवारी

Ex Ph D students:

1) Dr Ajit Singh Ahlawat (Currently Assistant Professor, CN Delft, The Netherlands)
2) Dr Vikas Goel (Currently Senior Research Scientist, Virginia Tech, USA)
3) Dr Sadaf Fatima (Currently Bihar Education Department, India)
4) Dr Sarla Yadav [Currently Manager (Environent); AE Pvt Ltd]
5) Dr Imtiaz Ahmad (Currently Assistant Professor, SKC Degree College, Poonch, Jammu & Kashmir, India)
6) Dr Mamta Devi [Currently AP is Engineering College, Gurugram]
7) Dr Supreet Kaur (Currently Guest Faculty, DU)
8) Dr Kartika Pandey (Currently CPCB, UP)
9) Mr Rishabh Singh (Thesis Submitted; Currently Guest Faculty, DU)
10) Ms Padma Tanwar (Thesis Submitted)

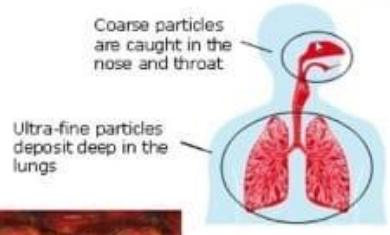
Current Ph D students:

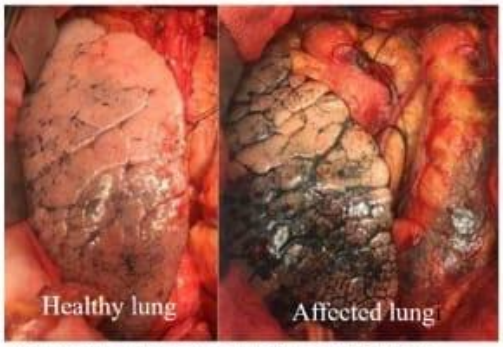
1) Ms Vandana Mann
2) Mr Vipin Anand

M Tech/M Sc/B Sc/B Tech Students

What Adverse Health Effects Have Been Linked to PM?

- ❑Premature death
- ❑Lung cancer
- ❑Development of chronic lung disease
- ❑Heart attacks
- ❑Neurological disorder





A comparison between a relatively healthier lung (left) to that of lung of a person (right) staying in Delhi

Source: Dr. Naresh Trehan, India Today 10 Dec 2015

SUMIT KUMAR is presenting, annotating

Vertical Observations

Aerosol Morphology, Composition and Mixing State Variation with Altitude
[21-27 Feb 2014 @CSIR-NPL, New Delhi]

Experimental Design:

- Experiment has been carried out from 21-27 Feb, 2014 on daily basis from 7 PM to 3.30 AM at CSIR-NPL (New Delhi).
- The tethered balloon (9.9 m^3 volume) filled with H_2 was used to lift the payload at the desired sampling altitude for ~ 7.5-8.5 hr.
- Ground level and fixed altitude sampling were synchronous.

Payload:

1) PM_5 sampler: for aerosol sampling
2) RS 80 Radiosondes: for met data (temp., pressure, humidity)

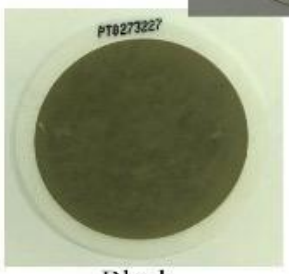
Analysis:

- HRTEM (High Resolution-Transmission Electron Microscopy)
- SEM-EDS (Scanning Electron Microscope equipped with Energy Dispersive X-ray Spectroscopy)
- TOF-SIMS (Time of Flight-Secondary Ion Mass Spectrometry)
- XRF (X-ray Florescence)
- Raman Spectroscopy
- FTIR (Fourier Transform Infra-Red Spectroscopy)

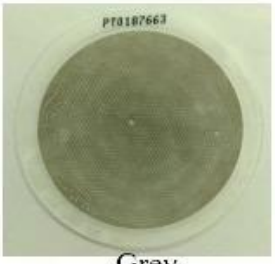
Mishra et al., 2018, Atmospheric Environment

Change in Filter Color: Indicator of PM Composition

Dark Black
19/02/2014



Black
25/2/2015



Grey
6/08/2014

Dark Yellow

N

Nirmal

a

anjna

Dr.Tanvi

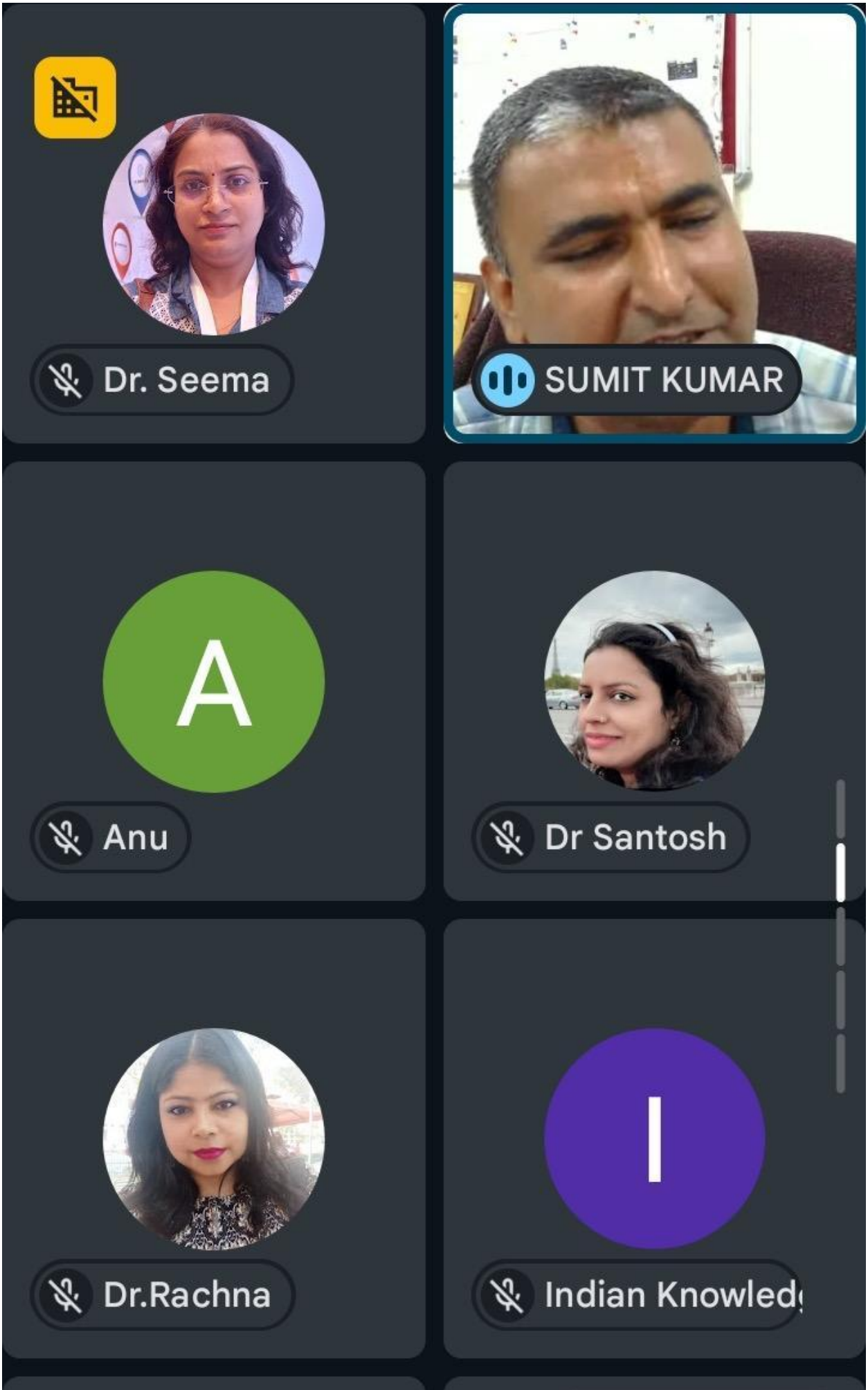
Sushma Rani

A

Anjula

P

Prabjot


Dr. Seema
SUMIT KUMAR
A
Anu
Dr Santosh
Dr.Rachna
I
Indian Knowled

Upendra Kumar

p

physics unravel

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M

Manisha

Mamta

pratima