IIT Delhi’s
CENTRE FOR ATMOSPHERIC SCIENCES { CAS }

Know more: https://cas.iitd.ac.in
Reach Us: Centre for Atmospheric sciences, Block VI
IIT Delhi, New delhi-110016.

Placement Brochure
2022-2023
The Centre for Atmospheric Sciences is a premier Centre for education and research in atmospheric and oceanic sciences in India. CAS offers MTech in Atmospheric - Oceanic Sciences & Technology” supported by Ministry of Earth Sciences (MoES), under the Government of India. The goal of CAS is to conduct cutting-edge interdisciplinary research and create highly skilled manpower for government and industrial sectors with Modelling, Data analysis and machine Learning techniques in 4 core areas:

- Atmospheric modelling
- Ocean modelling
- Air pollution
- Climate analysis
COURSE CURRICULUM

MAJOR COURSES
• Data Analysis Methods
• Science of Climate Change
• Dynamics & Physics of Atmosphere
• Atmospheric Chemistry and Air Pollution.

LAB COURSES
• Advanced Data Analysis for Weather and Climate
• Mathematical and Computational Methods
• Numerical Modelling of the Atmosphere and Ocean

ELECTIVES
• Tropical Meteorology, Cloud Physics
• Remote Sensing of The Atmosphere and Ocean
• Dispersion of Air Pollutants
Area of Research

- Weather Forecasting
- Tropical cyclones
- Indian summer Monsoon
- Renewable energy meteorology
- Air quality modelling and its Health Impacts
- Atmospheric modelling & extreme weather
- Climate model development & climate change impacts
- Urban climate

Lab Facilities

- PADUM High Performance computing facility
- SIKKA and RAMA storage facility
- Metrological observations and instruments
- Remote sensing lab
- Air quality monitoring lab
- Climate modelling, Air quality modelling, Ocean state forecasting labs
Students are familiar with, and using them extensively:

- Python, Fortran, R
- Machine Learning / Artificial Intelligence (AI/ML)
- Matlab
- Jupyter Notebook
- Linux environment
- Models
  - WRF
  - ROMS
  - CAM
  - CESM

CAM 5.3
The Community Atmosphere Model
ONGOING MTECH. PROJECTS

- Machine learning / Artificial Intelligence (AI/ML) Techniques
- Deep Learning

- Long term wind speed forecasting for Renewable energy application, using AI/ML techniques.
- Air quality forecasting using Machine Learning.
- Prediction of thunderstorm intensity using Lightning Detection System with AI/ML techniques.
➢ Understanding the spatiotemporal evolution of surface ozone production sensitivity as observed by the OMI satellite sensor.

➢ Real-time chemical characterization and source apportionment of post-monsoon organic aerosols in a polluted urban city in Delhi NCR.

➢ Understanding the impact of tropical cyclones in the Bay of Bengal and Arabian Sea using Numerical Models.
PAST RECRUITERS

- Data Analysts
- Data Scientist
- Business Analysts
- Modeller
- Meteorologist
- Atmospheric Scientist
- Wind specialist
- Peril specialist (Risk accessors)
CONTACT US

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