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
About Us

Centre for Atmospheric Sciences (CAS)

- 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
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
- Meteorological 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
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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