DIBYA KIRTI MISHRA

Research Scholar
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CONTACT

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RESEARCH SKILLS

- **Image Proceesing**
  Feature identification and feature tracking using various image processing techniques in the ground and space-based data.

- **Machine Learning**
  Feature identification using Convolutional Neural Network (CNN) technique (beginner)

AREA OF RESEARCH

My primary research field is Solar Astrophysics. My work is based on the long-term study of the Sun to understand the long-term variability in the solar cycle, which will help to understand the solar dynamo theory and also to predict the future solar cycle. For this, I take the help of the archival century-long data of Kodaikanal Solar Observatory and space-based data.

EDUCATION

Ph. D. - Solar Astrophysics   `2020 - ongoing`
ARIES - Nainital, Uttarakhand (India)

Thesis Title - **Long Term Study of Sun using Space and Ground-based Data**
Thesis Supervisor - **Prof. Dipankar Banerjee**

M. Sc. - Physics   `2017 - 2019`
Central University of Kerala - Kasargod, Kerala

Passed with distinction.

B. Sc. - Physics   `2014 - 2016`
University of Delhi - Delhi

WORKSHOPS & CONFERENCES

Space radiation workshop   `24-28 Jan 2022`
ARIES, Nainital, Uttarakhand, India

Online

40th Astronomical Society of India Meeting (ASI)   `25-29 Mar 2022`
IIT Roorkee, Roorkee, Uttarakhand, India

Presented talk titled "Study of chromospheric Differential Rotation of the Sun using Ca II K Data".

National Supercomputing Mission (NSM) workshop on High Performance Computing (HPC) for Computational Fluid Dynamics (CFD)   `17-20 May 2022`
IIT Bombay, Bombay, India

Participant

Aditya-L1 Science Support Cell Workshop   `27 Jun-6 Jul 2022`
ARIES, Nainital, Uttarakhand, India

Volunteered as project guide.

SKILLS

IDL 3+ yrs

Python 2+ yrs

Machine Learning 1+ yrs

LaTex 5+ yrs

ACHIEVEMENTS

GATE

Physics
Qualified in 2018, 2019.

JEST

Physics
Qualified in 2018, 2019.

CSIR-JRF

Physics
Qualified in 2019.

PROFILES

ORCID

OTHER SKILLS

Apart from my research work, I do sketching.

Young Astronomers' Meet (YAM), 2022 **9-13 Nov 2022**
ARIES, Nainital, Uttarakhand, India

Presented poster titled "Differential Rotation in the Solar Chromosphere".

Aditya-L1 Science Support Cell (AL1SSC) second workshop **28-30 Nov 2022**
Manipal Academy of Higher Education (MAHE), Manipal, Karnataka, India

Participant

41st Astronomical Society of India meeting **01-05 Mar 2023**
IIT Indore, Indore, India

Presented talk titled "Variation in the Chromospheric Differential Rotation over the Century".

3rd BINA Workshop, Indo-Belgian Cooperation **22-24 Mar 2023**
Graphic Era Hill University, Bhimtal, Uttarakhand, India

Presented talk titled "Variation in the Chromospheric Differential Rotation over the Century".

SOLARNET Conference **8-12 May 2023**
Haus H, Telegrafenberg, Potsdam, Germany

Presented talk titled "Differential Rotation of the Solar Chromosphere using multidecadal Ca K spectroheliograms" (online).

Aditya-L1 Support Cell 4th Workshop **28 Jun-7 Jul 2023**
ARIES, Nainital, Uttarakhand, India

Volunteered as project guide.

International Astronomical Union Symposium (IAUS 365) **21-25 Aug 2023**
Yerevan, Armenia

Presented talk titled "Differential Rotation of the Solar Chromosphere using multidecadal Ca K spectroheliograms".

OTHER RESPONSBILITIES

- Organisation and structuring of data observed from H α telescope, ARIES for the maintenance of the archival site.