

LAXMI PRASOON BARIK

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Raipur, Chhattisgarh, India

RESEARCH INTEREST

- Adaptive Optics and Atmospheric sciences
- Exoplanetary Sciences
- Cosmology

EDUCATION

- **Integrated M.Sc.** 2025
Center for Basic Sciences, PRSU, Raipur, C.G. | 84.90%
- **All India SSCE | 12th** 2020
Jawahar Navodaya Vidyalaya, Mahasamund, C.G. | 94.4%
- **All India SSE | 10th** 2018
Jawahar Navodaya Vidyalaya, Mahasamund, C.G. | 94.48%

PROJECTS

- **Shack-Hartmann Based Atmospheric Turbulence Monitor** Dissertation | January 2025
Advisor: Dr. Prashant Pathak, SPASE, IIT, Kanpur
- **Atmospheric Characterization Using Shack Hartmann Image Motion Monitor** IAS-SRFP | September 2024
Advisor: Dr. Prashant Pathak, SPASE, IIT, Kanpur
- **Detection and Study of Characteristics of Quasars Using SDSS** May 2024
Advisor: Dr. Laxmi Kant, Center for Basic Sciences, Raipur
- **Beyond Our Solar System: Discovering the Exoplanets** December 2023
Advisor: Dr. Laxmi Kant, Center for Basic Sciences, Raipur
- **Atom Based Electric Field Sensing** IAS-SRFP | August 2023
Advisor: Prof. Sudheesh Chethil, IIST, Thiruvananthapuram

FELLOWSHIPS AND SCHOLARSHIPS

- **Center for Basic Sciences Student Scholarship** 2020-25
- **IAS-INSANA Summer Research Fellowship, 2024** July-September, 2024
- **IAS-INSANA Summer Research Fellowship, 2023** July-August, 2023

SKILLS

- **Programming:** Python, C, FORTRAN, MATLAB, Mathematica
- **Operating System:** Linux, Windows
- **Software and Typesetting:** GNU Plot, \LaTeX , LibreOffice
- **Experimental Skills:** Basic Telescope Handling, Remote Sensing, FITS File Handling
- **Languages:** Hindi, English, Odia (Elementary Proficiency)

ACCOMPLISHMENTS AND EXPERIENCE

- **Program on All India Radio** 01 April, 2024
Yuva Vani, Akashvani Raipur
- **Appointed as Secretary** 2022-23
Student Council, PRSU, Raipur
- **Regional Science Congress** December 2019
JNV Ratibad, Bhopal
- **Regional Mathematics Olympiad, Mahasamund** 2018
Indian Association of Physics Teachers
- **Top 0.1% in Social Sciences** 2018
AISSE

SEMINARS , WORKSHOPS AND COURSES ATTENDED

- **Two Days Workshop On L^AT_EXfor Technical Writing** 29-30th April, 2025
School of Computational and Integrative Sciences, JNU, New Delhi
- **An Introductory Workshop on Exoplanet Detection and Characterization** 04-06th April, 2025
Indian Institute of Technology Kanpur
- **Poster competition on One day national conference on Molecules to Materials** 23rd February, 2025
SoS in Chemistry, PRSU, Raipur
Poster Title- Shack-Hartmann Based Atmospheric Turbulence Monitor
- **Five day National Workshop on L^AT_EXfor Mathematicians and Physicists** 20-24th March, 2023
Center for Basic Sciences, PRSU, Raipur
- **Online lecture series on Nonlinear Dynamics and Applications** 13-16th February, 2023
Indian Institute of Technology, Indore
- **One-Day Seminar on Intellectual Property Rights** 30th November, 2022
Center for Basic Sciences, PRSU, Raipur
- **One-Day Workshop on IYBSSD** July, 2022
Center for Basic Sciences, PRSU, Raipur
Title- International Year of Basic Sciences and Sustainable Development
- **Diploma in Quantum Computing and Programming** October, 2021
QWorlds's introductory tutorial Bronze - Qiskit
- **National Webinar on Coexisting with COVID-19** 13th May, 2021
Govt. Arts and Commerce Girls College, Raipur

• Seminars Attended

- First-ever discovery of a temperature giant exoplanet through direct imaging - Dr. Prashant Pathak (Department of SPASE, IIT Kanpur)
- Multifarious aspects of D-region modeling during solar flares using sub-ionospheric ULF propagation science - Dr. Tamal Basak (Indian Centre for Space Physics, Kolkata)
- Gravitational waves as a probe for fundamental physics and astronomy - Dr. Ajit Kumar Mehta (University of California at Santa Barbara)
- Gravitational Lensing Recent Developments in Strong Lensing - Prof. Jasjeet Singh Bagla (IISER-M and NCRA-TIFR, Pune)
- Space Weather: How the Sun Influences Planetary Habitability and Human Technologies - Prof. Dibyendu Nandi (IISER Kolkata)
- Supernovae Old and Young: From Remnants to Transients - Prasiddha Arunachalam (University of California)
- The Lunar Regolith: Unveiling Its Composition and Significance - Dr. Megha Bhatt (PRL, Ahmedabad)
- Synthetic Heliophysics Mission to Demonstrate Event-Driven Spacecraft Operations - Dr. Miles Bengston (Aurora Engineering)
- Multi-frequency VLBI observations of solar and non-solar transients - Mugundhan V. (Onsala Space Observatory, Chalmers)
- Building Imaging Systems in Space Platforms - Dr. Avyarthana Ghosh (Tata Research Development and Design Centre)
- Spectro-polarimetry of Earth-like Exoplanets : science and techniques - Dr. Bhavesh Jaiswal (Space Astronomy Group, UR Rao Satellite Centre, ISRO)
- Unravelling Cosmic Symphony of Merging Compact Binaries - Dr. Bhooshan Uday Gadre (GRASP, Utrecht University and National Institute for Subatomic Physics, Nikhef)

• Popular Science Talks Attended

- Aditya L1: India's Spaceborne Sun Chaser - Prof. Durgesh Tripathi (IUCAA, Pune) -**5th April, 2025**
- Kya Ham Taron Ki Dhool Se Bane Hain? - Prof. S.K. Pandey (Former VC, PRSU, Raipur) -**22nd Feb, 2025**
- Popli Distinguished Lecture Series on "Common Man Science" on "From Einstein to Enigma" - Prof. Manish Jain (IIT Gandhinagar) -**11th Nov, 2024**
- Light and Life - Prof. Harshawardhan Wanare (IIT Kanpur) -**22nd Oct, 2024**
- Basic Quantum Physics and Bell's Inequality - Prof. Ajoy Ghatak (Formerly IIT Delhi) -**09th Sept, 2024**
- National Space Day Event (Antariksh2024) - Organized by the Department of SPASE and Aerospace Engineering, IIT Kanpur -**24th Aug, 2024**

EXTRA CURRICULAR ACTIVITIES

- **Speech Competition** *February 2024*
BoB, Regional Office, Raipur | 3rd Prize
 - **International Essay Contest for Young People** *August 2023*
The Goi Peace Foundation
 - **Drama on Environment Day** *June 2023*
Center for Basic Sciences, PRSU, Raipur
 - **Volleyball at University festival: Abhyudaya** *April 2023*
Pt Ravishankar Shukla University, Raipur | 1st Prize
 - **Interdepartmental Essay Writing Competition** *March 2023*
Department of Yoga, PRSU, Raipur
 - **Role-play Competition** *October 2022*
Center for Basic Sciences, PRSU, Raipur | 1st Prize
 - **State-level extempore on Yuva Mahotsava** *December 2019*
Jagadalspur, C.G.
- Participation in various essay writing, elocution, arts, and rangoli making competitions during high school and graduation.

EXTRA CURRICULAR INTERESTS

- **Playing Flute**
- **Reading Novels**
- **Playing Volleyball and Table-Tennis**

REFERENCES

1. **Dr. Laxmi Kant**
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Pt Ravishankar Shukla University, Raipur
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2. **Dr. Prashant Pathak**
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Indian Institute of Technology, Kanpur
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