



# LEKHRAM HIRWANI

**Assistant Professor (Physics)**

**Phone:** 091-9907433013

**Email:** [lekhramhirwani@gmail.com](mailto:lekhramhirwani@gmail.com),  
[article.lrh@zohomail.com](mailto:article.lrh@zohomail.com)  
[lekhram.hirwani@gov.in](mailto:lekhram.hirwani@gov.in)

**Date of Birth:** 29<sup>th</sup> November 1982

**Correspondence Address:**

Village – Khartuli, Block – Dhamtari  
 District – Dhamtari, C.G., India, 493773

**Institution Address:**

Lt. D.B.T. Govt. College, Gurur  
 District – Balod, C.G., India, 491227

## Career Objective

To conduct research in the fascinating fields of Physics, Thin-Film and Nanotechnology, and seek employment in a prestigious institution that will inspire me to reach the greatest levels of personal and professional development in order to establish myself as a valuable member of the scientific community. My goal is to play a significant role in this challenging – demanding and innovative – creative environment.

## Career Profile

- ✚ August 2017 to till: Working as an Assistant Professor (Physics) at Lt. Daran Bai Taram Government College Gurur, District – Balod, C.G., Affiliated to Hemchand Yadav Vishwavidyalaya, Durg, C.G., India.
- ✚ October 2014 to July 2027: Worked as an Assistant Professor (Physics) at Government Nemichand Jain College, Dallirajhara, District – Balod, C.G., Affiliated to Hemchand Yadav Vishwavidyalaya, Durg, C.G., India.
- ✚ From 2009 to 2014: Worked as a Lecturer (Panchayat) in Higher Secondary Level School.
- ✚ From July 2022 to till: Pursuing Ph.D. at Government Nagarjuna Postgraduate College of Science, Raipur, C.G., India.

## Teaching Experience

- ✚ Have 11 Years of Teaching Experience in Undergraduate from 2014 to till date.
- ✚ Have 05 Years of Teaching Experience in Higher Secondary level from 2009 to 2014.

## Academic Profile

- ✚ Ph.D. in Physics (Pursuing) at the Government Nagarjuna Postgraduate College of Science, Raipur, C.G., India.
- ✚ M.Phil. in Physics (2009) from Dr. C.V. Raman University, Kota, Bilaspur, C.G., India.
- ✚ M.Sc. in Physics (2007) from the school of Studies in Physics and Astrophysics, Pt. Ravishankar Shukla University, Raipur, C.G., India.
- ✚ B.Sc. (Math's) (2003) from Government College Nagri, Dhamtari, C.G., India.
- ✚ Higher Secondary School (2000) from Government Boys School Gurur, Balod, C.G., India.
- ✚ High School (1998) from Government High School Sankara, Nagri, C.G., India.

## Member of

- ✚ Member of Board of Study of Physical Science, Hemchand Yadav Vishwavidyalaya, Durg, C.G. from 14<sup>th</sup> July 2023 to till date.

## Achievements

- ✚ NEP 2020 Orientation and sensitization Programme from MMTTC, Pt. Ravishankar Shukla University, Raipur, C.G., India, held on 20.11.2024 to 29.11.2024.
- ✚ Refresher Course in Physical and Earth Science from MMTTC, Pt. Ravishankar Shukla University, Raipur, C.G., India, held on 11.03.2024 to 23.03.2024.
- ✚ Faculty Development Program (FDP) in Research and Publication Ethics from Library Department, Pt. Ravishankar Shukla University, Raipur, C.G., India held on 20.09.2023 to 25.09.2023.
- ✚ Refresher Course in Physical Science from HRDC, Pt. Ravishankar Shukla University, Raipur, C.G., India, held on 12.12.2022 to 26.12.2022.
- ✚ Faculty Development Program (FDP) in ICT Tools for Teaching, Learning Process and Institute from Atal Bihari Vajpayee Vishwavidyalaya, Bilaspur, C.G., India held on 10.08.2020 to 21.08.2020.
- ✚ Faculty Development Program (FDP) in Excellence in College Education After Covid-19 Pandemic from Govt. E. Raghvendra Rao PG Science College, Bilaspur, C.G., India held on 30.06.2020 to 04.07.2020.
- ✚ Orientation Courses from HRDC, Pt. Ravishankar Shukla University, Raipur, C.G., India held on 25.07.2019 to 14.07.2019.
- ✚ Refresher Course in Recent Advances in Physics from HRDC, Pt. Ravishankar Shukla University, Raipur, C.G., India, held on 24.10.2017 to 13.11.2017.
- ✚ Qualified the State Eligibility Test (CG-SET) in 2017.

## Computational Skill

- ✚ Operating System – Windows.
- ✚ Programming – FORTRAN, C, C++, Visual Basic.
- ✚ Packages or Simulation – SCAPS 1D.
- ✚ Plotting Software – Origin, Excel.

## Paper Publication

- ✚ Computational Analysis of Thiourea Concentration in  $\text{Cu}_2\text{ZnSnS}_4$  Thin Film Solar Cells with n-ZnS Buffer and ZnO:Al Window Layers, **L Hirwani**, V Chandrakar, G Yadu, A Oudhia, B Verma, Journal - Next Research, 2025, Publisher- Elsevier, Publication Date: 04.07.2025, <https://doi.org/10.1016/j.nexres.2025.100581>
- ✚ Study of Temperature Dependence Optical Properties of (Cd-Zn)S Thin Film, Bhuneshwar Ram Verma (Researcher) Goverdhan Yadu, Deenbandu Deshmukh, Vani Chandrakar, **Lekhram Hirwani**, Pramod Yadav, Lekhram Verma, Journal - IJSRED-International Journal of Scientific Research and Engineering Development, Publisher – Zenodo, Publication Date: 05.10.2024. <https://doi.org/10.5281/zenodo.13892525>
- ✚ Study of Photoluminescence Properties of Undoped and La Doped (Cd-Zn)S Thin Film, Lekhram Verma Goverdhan Yadu, Deenbandu Deshmukh, Vani Chandrakar, **Lekhram Hirwani**, Pramod Yadav, Journal - International Journal of Research Publication and Reviews, Publisher - Genesis Global Publication Date: September 2024, <https://ijrpr.com/uploads/V5ISSUE9/IJRPR33029.pdf>
- ✚ Optical Properties Of Pr Doped Rare Earth Element In (Cd- Ag)S Thin Film Obtain By Chemical Bath Deposition Technique, Lekhram Verma Goverdhan Yadu, Deenbandu Deshmukh, Vani Chandrakar, **Lekhram Hirwani**, Pramod Yadav, Journal - International Research Journal of Modernization in Engineering Technology and Science, Publisher – IRJMETS Publication Date: September 2024, [https://www.irjmets.com/uploadedfiles/paper/issue\\_9\\_september\\_2024/61307/final\\_fin\\_irjmets1725296234.pdf](https://www.irjmets.com/uploadedfiles/paper/issue_9_september_2024/61307/final_fin_irjmets1725296234.pdf)

## Book and Chapter Publication

- ✚ Book Chapter on topic “The Role of III–V Semiconductor Materials and Compounds in Thin film Solar Cell Technology from 2018 to 2023: A Review”, L Hirwani, V Chandrakar, G Yadu, A Oudhia, In book: Futuristic Research Trends of 2025 (pp.201-215), Publisher - IIP Series, Publication Date: July 2025, DOI: <https://www.doi.org/10.58532/nbennurFRT18>

## Invited Lecture

- ✚ Given a lecture on the “Quantum Mechanics” on 11<sup>th</sup> December 2025 at Govt. Dr. Baba Saheb Bhimrav Ambedkar PG College Dongargaon, C.G., India.
- ✚ Given a lecture on the “Basic introduction to SCAPS 1D Simulation Software” on 7<sup>th</sup> May 2025 at Govt. GSG PG College Balod, C.G., India.
- ✚ Given a lecture on the “Use of Simulation Software SCAPS 1D on Characterization of Solar Cells” on 27<sup>th</sup> February 2024 at Govt. Kaktiya PG College Jagdalpur on the occasion of National Science Day 2024.
- ✚ Given a lecture on the “Physics Practical Instrument Handling and its Concepts” on 11<sup>th</sup> December 2023 at St. Thomas College Bhilai, C.G., India.
- ✚ Given a lecture on the “Semiconductor” on 15<sup>th</sup> March 2022 at St. Thomas College Bhilai, C.G., India.
- ✚ Given a lecture on the “Universe – Galaxy and Stellar Evolution I” on 28<sup>th</sup> February 2019 at Govt. Swami Atmanand PG College Narayanpur, C.G. on the occasion of National Science Day 2019.
- ✚ Given a lecture on the “Big Bang Theory and Universe” on 2018 at Shahid Domeswar Sahu Government College Jamgaon (R), Durg, C.G.

## Conferences and Workshops

- ✚ Participated and Oral Presented in International Conference CONIAPS XXXI on “Numerical Study of Electrical Impact of In<sub>2</sub>S<sub>3</sub> Thin Films As Buffer Layer In CZTS Solar Cells” jointly organized by School of Studies in Chemistry and School of Studies in Physics and Astrophysics, Pt. Ravishankar Shukla University, Raipur, C.G., India held on 20<sup>th</sup> and 21<sup>th</sup> December 2024.
- ✚ Poster Presented in International Conference, ICRTE-2024 on “Impact of Thiourea Molarity in CZTS Absorber Layer Thin Film Solar Cell Using SCAPS -1D” organized by Department of Physics, Govt. V.Y.T. PG Autonomous College, Durg, C.G., in association with IIT Bhilai, held on 08<sup>th</sup> to 10<sup>th</sup> February 2024.
- ✚ Participated in National Conference on Signal Processing, Sustainable Energy Materials and Astronomy and Astrophysics (NSSEMA-2023) organized by School of Studies in Physics and Astrophysics, School of Studies in Electronics and Photonics, Pt. Ravishankar Shukla University Raipur, C.G., India held on 16<sup>th</sup> to 18<sup>th</sup> March 2023.
- ✚ Organizing Member and Paper presented in Virtual National Seminar NSAMC-2022 on “ Optical Characterization of Cu<sub>2</sub>ZnSnS<sub>4</sub> Thin Films, Synthesized via Chemical Route” jointly organized by Govt. Nagaruna PG College of Science Raipur, Govt. Pt. Shyamacharan Shukla college Dharsiwa and Govt. Rajeev Lochan PG College Rajim, C.G., India held on 26<sup>th</sup> and 27<sup>th</sup> August 2022.
- ✚ Technical Team Member in the National Webinar on “Russia – Ukrain War and India’s Foreign Policy” organized by Govt. College Gurur, Balod, C.G., India held on 30<sup>th</sup> April 2022.
- ✚ Convener in the State level workshop on “How to Handle Physics Experiments” organized by Govt. College Gurur, Balod, C.G., India, held on 30<sup>th</sup> March 2022.
- ✚ Technical Team Member in the National Webinar on “Income Tax Return Filling and GST” organized by Govt. College Gurur, Balod, C.G., India held on 04<sup>th</sup> March 2022.
- ✚ Organizing Secretary in the Block level Public Interaction Program (PIP) on “Ground Water in Balod District” jointly organized by the Chhattisgarh Water Board (CGWB) Raipur and Govt. College Gurur on 10<sup>th</sup> December 2021.
- ✚ Participated in National Webinar on “Dark Energy and Dark Matter: Mysteries of the Universe”

organized by Seth Phoolchand Agrawal Smriti Mahavidyalaya Navapara-Rajim, C.G., India held on 23<sup>th</sup> July 2020.

- ✚ Participated in National Webinar on “Substance of Physics during Pandemic” organized by Govt. Rajeev Lochan PG College Rajim, C.G., India, held on 13<sup>th</sup> and 14<sup>th</sup> August 2020.
- ✚ Participated in National Webinar on “New Education Policy (NEP) – 2020” organized by Atal Bihari Vajpayee Vishwavidyalaya Bilaspur, C.G., India held on 12<sup>th</sup> August 2020.
- ✚ Participated in National Webinar on “Indian Energy Scenario: Growth of Solar Power and Way Ahead” organized by Govt. Pt. Madhav Rao Sapre College, Pendra Road, C.G., India held on 04<sup>th</sup> August 2020.
- ✚ Paper presented on topic “Nuclear Track Detectors in India for Searching Exotic Particles in cosmic Rays” in National Seminar organized by Govt. Chandulal Chandrakar Arts and Science College Patan, C.G., India held on 20<sup>th</sup> November 2019.

### An Important Contribution to Institution

- ✚ Technical Team Member in the National Webinar on “Russia – Ukrain War and India’s Foreign Policy” held on 30<sup>th</sup> April 2022.
- ✚ Convener in the State level workshop on “How to Handle Physics Experiments” held on 30<sup>th</sup> March 2022.
- ✚ Technical Team Member in the National Webinar on “Income Tax Return Filling and GST” held on 04<sup>th</sup> March 2022.
- ✚ Organizing Secretary in the Block level Public Interaction Program (PIP) on “Ground Water in Balod District” held on 10<sup>th</sup> December 2021.
- ✚ IQAC Coordinator from August 2017 to July 2022 and Institute awarded with B grade by NAAC.
- ✚ Secretary of Staff Council of College from 2022 to till date.
- ✚ HOD of the Physics Department from 2017 to till date.
- ✚ Member of JBS of College from 2020 to till date.
- ✚ Worked as Coordinator and Member of various Committees formed by College Administration from time to time.

*Thank You...*