



Dr. Yogesh Chandra

Assistant Professor

Department of Physics, Govt. P.G. College Bazpur, US Nagar
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SUMMARY

Dedicated and passionate Physics educator with a strong background in the field, proficient in delivering engaging lectures and practical demonstrations to undergraduate students, instilling a deep understanding and appreciation for the subject. Committed to academic excellence and professional development, I actively contribute to enhancing the institution's reputation through collaborative efforts and academic committee participation. As a highly motivated Researcher specialized in Astrophysics, Atmospheric Physics, Climate Change, and Space Weather, I possess expertise in data analysis, mathematical modeling, and scientific programming. My ambition is to make a significant impact on the field of Physics, contributing to scientific knowledge and finding sustainable solutions for global climate issues. Eager to collaborate with multidisciplinary teams on impactful research projects that positively shape the future of our planet.

APPOINTMENTS

ACADEMIC

Assistant Professor

Sep 2020 - Present Department of Physics - Govt. P.G. College Bazpur, Kumaun University - Nainital.

Assistant Professor

Dec 2015 - June 2020 Department of Physics - Govt. P.G. College Bageshwar, Kumaun University - Nainital.

Assistant Professor

Sept 2011 - Dec 2015 Department of Physics - D.S.B Campus, Kumaun University - Nainital.

ADMINISTRATIVE

Convener/Member Admission committee of College level - Constituted by the College Committee, (July/Aug - Every Year).

Invigilator/ Flying Squad Examinations of K. U. Nainital/Uttarakhand Open University

Haldwani - Constituted by the University/College Committee.

Core Committee Member Student Elections of College Level - Constituted by the College Committee.

Member/ Jury Sports and Cultural Activities organized by College - Constituted by the College Committee.

EDUCATION

PhD in Physics

June 2023 Department of Physics, D.S.B Campus, Kumaun University - Nainital, India. Supervisor: Prof. Dr. S. Pande.

- Solar activity, Solar flares, Solar corona, Solar magnetism, Solar cycle, Solar atmosphere, Solar physics, Solar observations, Solar magnetic fields, Solar variability.
- Thesis Title: "*Study of Asymmetric and Periodic Behaviour of Some Solar Activity Features*".

MSc in Physics

August 2009 Department of Physics, S.S.J Campus Almora, Kumaun University - Nainital, India.

- Relevant Coursework: Classical Mechanics, Mathematical Methods, Electronics, Quantum Mechanics, Condensed Matter Physics, Nuclear Physics, Atomic and Molecular Physics, Computer Architecture, Electrodynamics, Statistical Mechanics.

BSc in Basic Science

November 2007 S.S.J Campus Almora, Kumaun University - Nainital, India.

FURTHER QUALIFICATIONS

2011 CSIR-NET (Physical Science)
GATE (Physical Science)

2010 CSIR NET (Physical Science)

RESEARCH INTERESTS

Astrophysics, Astronomy, Cosmology, Atmospheric Science, Planetary Astrophysics: Stellar Astrophysics, Galactic Dynamics, Galaxy Formation & Evolution, Solar Activity, Solar Observations, Solar Cycles & Flares, Black hole, Planetary Atmospheres, Space Weather, High-energy Astrophysics.

CERTIFICATIONS

2006 NSS C Certificate - S. S. Jeena Campus Almora

Jan 1 - 10, 2006 NSS 10 Days Camp Certificate - S. S. Jeena Campus Almora

2005 NSS B Certificate - S. S. Jeena Campus Almora

HONORS AND AWARDS

- 2002 Meritorious Student Certificate** - Minister of State for Science and Technology, Government of India.
- 2001 Essay Competition** - East Almora Forest Department Bageshwar
- 2001 National Environmental Awareness Program** - Ministry of Environment and Forests, Government of Uttarakhand.
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TEACHING EXPERIENCE

DURING TENURE SEP 2020 - PRESENT

POSTGRADUATE

Mathematical Physics: M.Sc. I Sem - Instructor
Atomic and Molecular Physics: M.Sc. I Sem - Instructor
Advanced Quantum Mechanics: M.Sc. II Sem - Instructor
General Theory of Relativity and Cosmology: M.Sc. II Sem - Instr.
Special Paper II (Electronics): M.Sc. III Sem - Instructor
Special Paper IV (Electronics): M.Sc. IV Sem - Instructor

UNDERGRADUATE

Electricity: B.Sc. I Sem - Instructor
Magnetism: B.Sc. II Sem - Instructor
Heat and Thermodynamics: B.Sc. III Sem - Instructor
Solid State Physics: B.Sc. IV Sem - Instructor
Quantum Mechanics: B.Sc. V Sem - Instructor
Analog and Digital Electronics: BSc. VI Sem - Instructor

DURING TENURE DEC 2015 - JUN 2020

POSTGRADUATE

Mathematical Physics: M.Sc. I Sem - Instructor
Quantum Mechanics: M.Sc. I Sem - Instructor
Electrodynamics: M.Sc. II Sem - Instructor
Digital Electronics and Computer Architecture: M.Sc. II Sem - Inst.
Advanced Quantum Mechanics: M.Sc. III Sem - Instructor
Nuclear Physics: M.Sc. III Sem - Instructor
Advanced Electronics II: M.Sc. IV Sem - Instructor

UNDERGRADUATE

Electricity and Magnetism: B.Sc. I Year - Instructor
Heat, Thermodynamics & Statistical Physics: B.Sc. II Year - Instr.
Modern Physics: B.Sc. III Year - Instructor

DURING TENURE SEP 2011 - NOV 2015

POSTGRADUATE

Mathematical Physics: M. Sc. I Sem - Instructor
Communication Electronics: M. Sc. I Sem - Instructor
Advanced Electronics II: M. Sc. IV Sem - Instructor

UNDERGRADUATE

Electricity and Magnetism: B.Sc. I Year - Instructor
Quantum Mechanics: B.Sc. III Year - Instructor

RESEARCH CONTRIBUTIONS

GUIDED STUDENT RESEARCH

Supervised and guided for Dissertation of M. Sc. students of the Department of Physics, Govt. P. G. College Bazpur (U. S. Nagar) in partial fulfillment for the award of the degree of Master in Science in Physics for session 2020-23.

- Aarti** “Study of Low Power Linear Feedback Shift Registers” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Sagar Singh** “Comparative Study and Applications of Different types of Flip-Flops” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Reenu** “Security for broadband metropolitan and wide areas network at the access interface level” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Jyoti Joshi** “Satellite Communication” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Sachin Gaula** “Size Impact on Thermo-Elastic Properties of Nanomaterials” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Arpit Agrawal** “Operational Amplifier” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Urvashi** “Zener Diode” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Syed Saood Asim** “Formation of Supermassive Black Holes” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Mohd Rashid** “Boolean Algebra and Logic Family” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Sapna Yadav** “IC 555 Timer” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Ritika Yadav** “Lithium-ion Battery for Electric Vehicles” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Pawan Singh Nayal** “Artificial Intelligence” - M. Sc. IV Semester, (A+) Grade, 6 Months.
- Sushmita** “Optical Fibre Communication” - M. Sc. IV Semester, (A+) Grade, 6 Months.
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PROFESSIONAL SERVICES

- March 4, 2023** Organizer for guest lecture on “*Development of Quantum Mechanics*” by Dr. N. S. Bisht, Assistant Professor, Department of Physics, S.S. Jeena Campus, Almora in Govt. P. G. College Bazpur (U. S. Nagar).

February 21, 2023 **Convener** for guest lecture on **“Research methodology in Vedic Science Energies”** by Dr. Richa Saini, Assistant Professor, Gurukul Kangri University, Haridwar.) in Govt. P. G. College Bazpur (U. S. Nagar).

February 28, 2022 & 2023 **Convener** of **“Science Committee”** (Science Seekers) in Govt. P. G. College Bazpur (U. S. Nagar) and delivered Raman Memorial Lecture.

May 27, 2022 **Program coordinator** for Guest Lecture on **“Research methods: Analytical Instruments”** by Dr. N S Bisht, Assistant Professor, Department of Physics, S. S. Jeena Campus, Almora in Govt. P. G. College Bazpur (U. S. Nagar).

May 27, 2022 **Program Co-Convener** for career counseling program on **“Future Career Prospects for Science Students”**, by Prof. G. C. Joshi from G. B. Pant University of Agricultural and Technology, Pantnagar, organized by Department of physics, Govt. P. G. College Bazpur (U. S. Nagar) on 27/05/2022.

May 23, 2022 **Program coordinator** for guest lecture on **“Relevance of ancient science in Modern Research Methodology”** by Dr. Richa Saini, Assistant Professor, Gurukul Kangri University, Haridwar. in Govt. P. G. College Bazpur (U. S. Nagar).

February 21, 2022 **Program Coordinator** for one day workshop on **“Research methodology and Technical Writing (LaTeX)”** in Govt. P. G. College Bazpur (U. S. Nagar).

INVITED PRESENTATION

NON-REFEREED

November 28, 2019 Delivered an engaging lecture on **“Intellectual Property Rights (IPR)”**, emphasizing its significance in today’s global landscape in Govt. P. G. College Bazpur (U. S. Nagar).

LANGUAGE

Hindi: (Native), **English:** Listening, Reading, Writing - C2, Speaking - B2.

PROFESSIONAL ORGANIZATIONAL MEMBERSHIPS

- **Core Member** of **“National Assessment and Accreditation Council”** (NAAC) Committee of Govt. P. G. College Bazpur (U. S. Nagar) during 2022-23 and 2023-24.
- **Core Member** of **“Department of Physics Council”** of Govt. P. G. College Bazpur (U. S. Nagar) from September 2020 to Current.
- **Convener** of **“Department of Physics Council”** of Govt. P. G. College Bageshwar from December 2015 to June 2020.
- **Life membership** of **“INDIAN ASSOCIATION OF PHYSICS TEACHERS”** Association from September 25, 2018.

CORE COMPETENCIES

- Subject Matter Expertise
 - Teaching and Instruction
 - Research Skills
 - Mentoring and Advising
 - Curriculum Development
 - Collaboration and Networking
 - Communication Skills
 - Adaptability and Innovation
 - MATLAB
 - Artificial Neural Networks (ANN)
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WORKSHOP/ CONFERENCES/SEMINARS

- May 23-24, 2023** Two Days National Seminar Title **“Swami Vivekananda’s global message regarding women empowerment and youth”** organized by Department of Education, S. S. Jeena University Almora.
- March 15-16, 2023** Two Days National Seminar Title **“Environmental Challenges and Sustainable Development in Himalayan Region in 21 st Century”** organized by Govt. Degree College, Kanda, Bageshwar.
- Feb 28, 2023** One-day National seminar Title **“C V Raman and his contribution in Science”** organized by Department of Physics, School of Sciences, Uttarakhand Open University, Haldwani.
- May 20–21, 2022** Two Days International Conference Title **“Dynamical Systems and Numerical Methods (ICDSNM-22)”** organized by Department of Mathematics, Jamia Millia Islamia University, New Delhi, India.
- May 20, 2022** One Day Workshop Title **“Planetary Exploration of the Moon: Findings from Indian Remote Sensing Missions”** organized by Department of Space, IIRS, Dehradun.
- March 14–16, 2019** Three Days International Conference Title **“Advances in Physics from Small to Large Scales (APSLs-2019)”** organized by Department of Physics, D. S. B. Campus Nainital, Uttarakhand.
- June 12–14, 2017** Three Days International Conference Titled **“Science, Social Science, Agriculture and Management (ICSSAM 2017) and Workshop on Soft Computing Modeling in Medical Sciences”** organized by Birla Institute of Applied Sciences, Bhimtal, Uttarakhand (India).
- Dec 27-28, 2014** Two Days National Seminar Title **“Recent Development in Physics and Prosperity in Solar Physics- Space Science”** organized by

Department of Physics, M. B. Govt. P. G. College Haldwani, Uttarakhand.

Jan 28 - Feb 17, 2014

Twenty One Days Workshop Title “**Research Orientation Workshop in Physics**”, organized by Research Development Committee, M. B. Govt. P. G. College Haldwani, Uttarakhand.

Nov 3-4, 2012

Two Days National Conference Title “**Recent Trends in Interdisciplinary Research and Astrophysics Space Science**”, organized by Department of Physics, M. B. Govt. P. G. College Haldwani, Uttarakhand.

PUBLICATIONS

2023 “**Analysis of Sunspot Numbers for Solar Cycle 24 using Artificial Neural Network**”. Y Chandra, B Pande, M C Mathpal and S Pande, *Communicated to New Astronomy*.

2022 “**N-S Asymmetry and Periodicity of daily sunspot number during solar cycles 22- 24**”. Y Chandra, B Pande, M C Mathpal and S Pande, *Astrophysics, Springer, (2022), 65 (3), 404-413*.

2020 “**Variability of Total Column Ozone with Solar Activity Features at Northern and Eastern Regions of India**”. Y Chandra, S Pande, B Pande and M C Mathpal, *Applied Ecology and Environmental Sciences, (2020), 8 (6), 441-450*.

REFERENCES

- Prof. O.P.S. Negi, Vice-Chancellor, Uttarakhand Open University Haldwani (Nainital)
Email-opsnegi@gmail.com
Contact-9412092677
- Prof. Bimal Pande, Professor, Department of Physics, D. S. B. Campus Nainital, Kumaun University Nainital
Email-pandebimal@yahoo.co.in
Contact-9412044061
- Dr. Shailesh Upreti, Senior Scientist, Department of Chemistry, Binghamton University New York.
Email-shailupreti@gmail.com
Contact- 001-6077591634



Date:.....

Place:.....

(Dr. Yogesh Chandra)

