Dr. Aman Phogat

Curriculum Vitae

70-D, Humayunpur, S. J. Enclave, New Delhi-110029, India
+91-9643365323
amanphogat@hrc.du.ac.in
Citizenship: Indian

Current Position

2022–Present **Assistant Professor (Permanent)**, *Hans Raj College, University of Delhi*, Delhi, India

Education

2015–2021 **Ph.D. in Experimental High Energy Physics**, *Department of Physics & Astrophysics, University of Delhi*, India
Thesis: Development of RPCs and front-end electronics for ICAL experiment
(Supervisor: Prof. Md. Naimuddin)

2010–2012 **M.Sc. in Physics**, *Kirori Mal College, University of Delhi*, India
First Division

2007–2010 **B.Sc. in Physics**, *Atma Ram Sanatan Dharma College, University of Delhi*, India
First Division

Experience

2022 (Nov) –Present **Assistant Professor (Permanent)**, *Hans Raj College, University of Delhi*, Delhi, India
Taught: Nuclear and Particle Detectors, Mechanics, Electricity and Magnetism, Mathematical Physics, Photonics; **Labs:** Quantum Mechanics, E&M, Modern Physics, Solid State Physics, Research Methodology

2022 (Feb–Aug) **Assistant Professor (Ad-hoc)**, *Acharya Narendra Dev College, University of Delhi*, Delhi, India
Taught: Mechanics, Solid State Physics; **Labs:** Waves & Optics, Thermal Physics

2021–2022 **Assistant Professor (Guest Faculty)**, *Dyal Singh College, University of Delhi*, Delhi, India
Taught: Mechanics, Mathematical Physics-I; **Labs:** Waves & Optics, Computational Lab

Honors & Awards

2013 Qualified CSIR-UGC NET (Physical Sciences), Rank 87

2015–2017 DST Junior Research Fellowship, India

2017–2020 DST Senior Research Fellowship, India

2024 Honorable Mention Poster Award — "Assessment of Outgassing and Ageing in Resistive Plate Chambers Using Gas Chromatography" at DAE-BRNS HEP Symposium, BHU, India

Research Interests

Particle Detectors for HEP, Front-end Electronics, Gaseous Detectors, Medical Imaging Instrumentation

Publications

- Search for environment-friendly CO_2 gas mixtures for glass RPCs, Aman Phogat *et al.*, *Nucl. Instrum. Meth. A*, 1072 (2025) 170170.
- Uniformity study of large glass RPC detectors using alternative front-end electronics, Aman Phogat *et al.*, *Nucl. Instrum. Meth. A*, 978 (2020) 164336.
- Outgassing and leak test of INO-ICAL RPC detectors, Aman Phogat *et al.*, *JINST*, 15 (2020) T10006.
- New front-end electronics for INO-ICAL experiment, Aman Phogat *et al.*, *Nucl. Instrum. Meth. A*, 905 (2018) 193–198.

- Integration of front-end electronics for INO-ICAL RPCs, *Nucl. Instrum. Meth. A*, 936 (2019) 366–367.

Conference Proceedings

- RPC performance with HARDROC based readout, Journal of Instrumentation (JINST) 15 C06036, (2020)
- Development and commissioning of the HARDROC based readout for the INO-ICAL experiment, Journal of Instrumentation (JINST) 11 C10004, (2016)
- HARDROC2B: A Readout ASIC for INO-ICAL RPCs, Springer Proc.Phys. 261 (2021) 719-724
- Performance study of large size RPC detector for INO-ICAL experiment, Springer Proc.Phys. 203 (2018) 755-757
- Timing and induced charge profile of large size RPC detector for INO ICAL experiment, Springer Proc.Phys. 203 (2018) 369-371
- Front-end readout for INO-ICAL GRPC, Springer Proc.Phys. 203 (2018) 805-807

Conference Presentations

International

2020 RPC2020, Rome, Italy — Talks on detector uniformity and leak studies

2019 XXIII Int'l Conf. of Young Scientists, Dubna — Gas-mix studies using HARDROC

National

2024 DAE-BRNS Symposium, BHU — Eco-Friendly Gas Mixtures for HEP Detectors

2018 DAE-BRNS Symposium, IIT Madras — HARDROC2B ASIC performance

2016 DAE-BRNS Symposium, University of Delhi — Poster on large RPC performance

Workshops & Training

2025 Refresher on Research Methodology (MM-TTP, UGC); Workshop on Data Analysis in Astrophysics (Hans Raj College)

2025 Webinar: Sun-Space Weather Connections (Hans Raj College + SLC)

2024 Coordinator: Seminars on Semiconductor Technologies; Workshop on ICT/AI (Hans Raj College)

2023 FDP: Radiation Detection and Experimental Techniques; NEP-2020 Online Training (UGC/MM-TTP)

2016 SERC School, Experimental HEP (DU)

2015 SAKURA Youth Exchange Program, Osaka University, Japan

Skills

Lab Techniques	RPC assembly and testing, leak diagnostics, uniformity analysis
Electronics	HARDROC calibration, ASIC integration, VME systems
Analysis	Cluster size, efficiency profiling, timing and charge measurement

Personal Details

Date of Birth	15 August 1989
Languages	English, Hindi