



Faculty Details proforma for DU Web-site

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| Title | Dr. | First Name | Ashok | Last Name | Kumar | Photograph |
| Designation | Assistant Professor | | | | |  |
| Address | Department of Physics & Astrophysics, University of Delhi, Delhi – 110007. | | | | | |
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| Email | ashok.kumar@cern.ch | | | | | |
| Educational Qualifications | | | | | | |
| Degree | Institution | | | | Year | |
| Ph.D. High Energy Physics | Panjab University, Chandigarh | | | | 2007 | |
| PG M.Sc. (Honours) Physics | Panjab University, Chandigarh | | | | 2001 | |
| UG B.Sc. | Himachal Pradesh University, Shimla | | | | 1999 | |
| Career Profile | | | | | | |
| 2008- till date: Assistant Professor, Department of Physics & Astrophysics, University of Delhi, Delhi. | | | | | | |
| 2006- 2008: Assistant Professor, Department of Physics, Guru Nanak Dev University, Amritsar. | | | | | | |
| Administrative Assignments | | | | | | |
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| Areas of Interest / Specialization | | | | | | |
| High Energy Physics, Higgs Physics, Detectors and Instrumentation CMS experiment at Large Hadron Collider | | | | | | |

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| Subjects Taught |
| Nuclear Physics, Particle Physics, Classical Mechanics, Quantum Mechanics |
| Research Guidance |
| PhD Registered Students: 02, Thesis Submitted: 01 |
| Publications Profile |
| <ol style="list-style-type: none"> 1) Observation of a new boson at a mass of 125 GeV with the CMS experiment at the LHC CMS Collaboration, Phys. Lett. B 716 (2012) 30-61 2) Search for a standard-model-like Higgs boson with a mass in the range 145 to 1000 GeV at the LHC, CMS Collaboration, <i>Eur. Phys. J. C</i> 73 (2013) 2469 3) Search for the standard model Higgs boson in the H to ZZ to 2l 2nu channel in pp collisions at sqrt(s) = 7 TeV, CMS Collaboration, <i>JHEP</i> 03 (2012) 040. 4) Search for the standard model Higgs Boson in the decay channel $H \rightarrow ZZ \rightarrow 4\ell$ at CMS, CMS Collaboration, CMS PAS HIG-11-004, HIG-11-015 (2011) 5) Abdulin, S, et al., 2009. The CMS Barrel Calorimeter Response to Particle Beams from 2 to 350 GeV/c. CERN-CMS NOTE-2008/034, <i>Eur. Phys. J. C</i> 60: 359-373. 6) Abdulin, S, et al., 2008. Design, Performance and Calibration of the CMS Hadron-Outer Calorimeter. CMS-NOTE-2008-020. <i>Eur. Phys. J. C</i> 57: 653-663. 7) Abdullin, S, et al., 2008. Design, Performance and Calibration of CMS Hadron-Barrel Calorimeter Wedges. CERN-CMS-NOTE-2006-138, FERMILAB-PUB-08-246-CMS. <i>Eur. Phys. J. C</i> 55: 159-171. 8) Bayatian, G, et al., 2008. Design, performance and calibration of the CMS forward calorimeter wedges. CERN-CMS-NOTE-2006-044. <i>Eur. Phys. J. C</i> 53: 139-166. 9) Study of RPC bakelite electrodes and detector performance for INO-ICAL, JINST 2014 9 C10042. 10) Characterisation of glass electrodes and RPC detectors for INO-ICAL experiment, JINST 2014 9 C10039. 11) Characterisation of 3 mm Glass Electrodes and Development of RPC Detectors for INO-ICAL Experiment, Nuclear Instrumentation and Methods (NIM) A 774, 74-81 (2015). 12) Timing and Charge measurement of single gap Resistive Plate Chamber for INO-ICAL Experiment, Nuclear Instrumentation and Methods (NIM) A 877, 246-251 (2018). 13) Development, Characterization & Qualification of first GEM foils produced in India, Nuclear Instrumentation and Methods (NIM) A 892, 10-17 (2018). |
| Conference Organization/ Presentations (in the last three years) |
| <ol style="list-style-type: none"> 1. Higgs Boson in CMS (Results with 13 TeV LHC Data), <i>Light Cone 2017, Frontiers in Light Front Hadron Physics: Theory and Experiment (LC 2017)</i>, Sept. 18-22, 2017, University of Mumbai (India). 2. Performance of Glass Resistive Plate Chambers using HARDROC multichannel Readout, <i>International Workshop on RPCs (RPC'16)</i>, February - 2016, Ghent |

(Belgium),

3. **Dark Matter searches at CMS, Blois2016: 28th Rencontres de Blois - Particle Physics and Cosmology, 29 May - 3 Jun 2016, Blois (France).**
4. **The Dark Matter at LHC, Advances in Nuclear and Particle Physics: Present and Future, Feb 08-12, 2016, Jalandhar (India).**
5. **Study of RPC Bakelite electrodes and detector performance, International Workshop on RPCs (RPC'14), February - 2014, Beijing (China),**
6. **Higgs Searches at CMS, Physics at LHC 2011 (PLHC'11), June - 2011, Perugia (Italy).**
7. **Impact Parameter observables for the background - rejection in H -ZZ* -- 4 leptons "4lepton" Final State workshop, July - 2011, Paris (France).**

Research Projects (Major Grants/Research Collaboration)

Member, CMS Collaboration

Member, INO Collaboration

Awards and Distinctions

Association With Professional Bodies

Other Activities