

CV FORMAT

1. Name: Jyotsna Singh
2. Profession: Assistant Professor
3. Nationality: Indian
4. Membership of Professional Associations: Indian Science Congress
5. International and National Experience:

Worked as Visiting assistant professor at University of South Carolina, US

Actively involved in R & D of Deep Underground Neutrino Observatory, Fermi Lab, US

Contributed for R & D of Indian Neutrino Observatory, India.

6. Number of projects pursued by the team (on-going and those completed in last 5 years)

Title of the project	Funding Agency & Total cost	Lead coordinator and Duration of the project	Significant outcomes
R & D Efforts by University Groups for INO Project.	DST Rs. 38,96,000/-	Jyotsna Singh 5 years	Research Publications

7. Areas of Intervention: Particle Physics, Nuclear Physics, Renewable Energy

8. Publications :

Few of published research paper

1. Srishti Nagu, Jaydip Singh , Jyotsna Singh, R.B. Singh; Impact of cross-sectional uncertainties on DUNE sensitivity due to nuclear; Nuclear Physics B 951 (2020) 114888
2. Jaydip Singh, Srishti Nagu, Jyotsna Singh, R.B. Singh; Quantifying multinucleon effect in the Ar-target using High Pressure gas TPC DUNE Near Detector; <https://arxiv.org/abs/1909.10329>
3. “Atmospheric muon charge ratio analysis at the INO-ICAL detector” Jaydip Singh and Jyotsna Singh Advances in High Energy Physics, 2019
4. Sabeeha Naaz, Anupam Yadav, Jyotsna Singh, R.B. Singh (Lucknow U.), Effect of final state interactions on neutrino energy reconstruction at DUNE, Nucl.Phys. B933 (2018) 40–52, [arXiv:1804.02191](https://arxiv.org/abs/1804.02191) [hep-ph]
5. Srishti Nagu, Jaydip Singh, Jyotsna Singh, Nuclear Effects and CP Sensitivity at DUNE, [arXiv:1906.02190](https://arxiv.org/abs/1906.02190) [hep-ph], Advances in High Energy Physics, Volume 2020 |Article ID 5472713 | 6 pages | <https://doi.org/10.1155/2020/5472713>
6. Jyotsna Singh, Revisiting Neutrino Oscillation Physics in presence of Nuclear Effect, DAE Symp.Nucl.Phys. 63 (2018) 57-58
7. Sabeeha Naaz, Jyotsna Singh, R. B. Singh , DUNE potential for sub-GeV dark matter in proton beam dump mode, <https://arxiv.org/abs/1912.08468>

8. Animesh Chatterjee, Raj Gandhi (Harish-Chandra Res. Inst.), Jyotsna Singh(Lucknow U.) ; 2014 ;Probing Lorentz and CPT Violation in a Magnetized Iron Detector using Atmospheric Neutrinos, Feb 25, 2014- 16 Page, JHEP 1406(2014)045. Impact Factor 6.3
9. Yogita Pant, Sujata Diwakar, Jyotsna Singh, R.B.Singh; 2016; Checking T and CPT violation with sterile neutrino; arXiv:1509.04096v3[hep-ph], Nuclear Physics B, Volume 909, pp. 1079-1103
10. [ICAL Collaboration]; 2015; Physics Potential of the ICAL detector at the India-based Neutrino Observatory(INO), Pramana - J. Phys (2017) 88 : 79; arXiv:1505.07380[physics.ins-det]; 27 May 2015
11. Jaydip Singh and Jyotsna Singh; 2017; Atmospheric muon charge ratio analysis at the INO-ICAL detector; arXiv:1709.01064v1[physics.ins-det], Astroparticle Physics Journal.
12. Jaydip Singh and Jyotsna Singh; 2017; Analysis of Ultra High Energy Muons at INO-ICAL Using Pair-Meter Technique; arXiv:1709.07445v1[physics.ins-det]
13. Chandra, R.; Singh, J.; Rath, P.; Raina, P.; Hirsch, J.; 2005 ; Two-neutrino double- β decay of $94 \leq A \leq 110$ nuclei for the $0^+ \rightarrow 0^+$ transition; Eur. Phys. J. A 23, 223-234, 2005.
14. J.Singh, P.K.Rath, Ramesh Chandra ; 2005 ; Two-neutrino double beta decay of Zr 96 to excited 2^+ state of Mo96 in Pramana , Vol. 65, 517.

15. Jyotsna Singh, Signatures of T and CPT Violation in presence of sterile neutrino, Eur.Phys.J.A .
16. Sharda Pandey, Satendra Singh and Jyotsna Singh, Prompt muon contribution at high energies, Springer Proc.Phys. 203 (2018) 209-214
17. INO Collaboration,India-based Neutrino Observatory: Project Report. Volume I.
18. [DUNE Collaboration] Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE); Conceptual Design Report.;Volume 4: The DUNE Detectors at LBNF, FERMILAB-DESIGN-2016-04; arXiv:1601.02984[physics.ins- det]12Jan2016.
19. [DUNE Collaboration]; 2016;Long-Baseline Neutrino Facility (LBNF) and Deep Underground Neutrino Experiment (DUNE);Conceptual Design Report, Volume 2: The Physics Program for DUNE; FERMILAB-DESIGN-2016-02, arXiv: 1512.06148v2[physics.ins-det]22Jan2016
20. [DUNE Collaboration]; 2016;Long Baseline Neutrino Facility and Deep Underground Neutrino Experiment (DUNE); Conceptual Design Report.Volume 1: The LBNF and DUNE Projects FERMILAB-DESIGN-2016-01, arXiv:1601.05471v1[physics.ins- det]20Jan2016
21. The DUNE Far Detector Interim Design Report, Volume 3: Dual-Phase Module,DUNE Collaboration (B. Abi (Oxford U.) *et al.*),Jul 26, 2018 - 280 page, FERMILAB-DESIGN-2018-04,e-Print: [arXiv:1807.10340](https://arxiv.org/abs/1807.10340) [physics.ins-det] | ,Experiment: [DUNE](https://dunepublic.web.cern.ch/)

22. The DUNE Far Detector Interim Design Report, Volume 2: Single-Phase Module DUNE Collaboration (B. Abi (Oxford U.) *et al.*) [Show all 1099 authors](#), Jul 26, 2018 - 324 pages, FERMILAB-DESIGN-2018-03, e-Print: [arXiv:1807.10327](#) [physics.ins-det] | PDF Experiment: [DUNE](#)
23. [DUNE Collaboration], 2020; Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume IV Far Detector Single-phase Technology; FERMILAB-PUB-20-027-ND; <https://arxiv.org/abs/2002.03010>
24. [DUNE Collaboration], 2020; Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume II DUNE Physics; FERMILAB-PUB-20-025-ND, <http://arxiv.org/abs/arXiv:2002.03005>
25. [DUNE Collaboration], 2020; Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume 1 Introduction to DUNE; FERMILAB-PUB-20-024-ND; <https://arxiv.org/abs/2002.02967>
26. [DUNE Collaboration], 2020; Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume III DUNE Far Detector Technical Coordination; FERMILAB-PUB-20-026-ND; <https://arxiv.org/abs/2002.03008>
27. [Anupam Yadav](#), [Sabeeha Naaz](#), [Jyotsna Singh](#), [R.B. Singh](#); Neutrino Oscillations and Leptogenesis; arXiv:1901.06127
28. [Jaydip Singh](#), [Jyotsna Singh](#) ; Measurement of Underground Cosmic Muons Charge Ratio at INO-ICAL Detector, Springer Proc.Phys. 203 (2018) 751-75

29. Jyotsna Singh, R.B. Singh ; Signatures of T and CPT Violation in Presence of Sterile Neutrino, Springer Proc.Phys. 203 (2018) 647-650
30. Srishti Nagu, Jaydip Singh, Jyotsna Singh, R.B.Singh; Quantifying multinucleon effect in the Ar-target using High Pressure gas TPC proposed for DUNE Near Detector ; <https://arxiv.org/abs/1909.10329>

Invited Lectures: 20

Session Chair in Conferences :20

Papers Published in National International Conferences: 25

National Collaboration :01

International Collaboration: 02