

# Curriculum Vitae

<https://inspirehep.net/authors/1039649>

<https://twitter.com/sanjibneutrino>

## Sanjib Kumar Agarwalla, FNASc

Associate Professor - G,

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**Specialization:** High Energy Particle Physics and Astrophysics

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## Work Experience

- **April 2024 - till date:**  
Honorary Fellow, Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA (Host: [Professor Francis Halzen](#))
- **January 2023 - March 2024:**  
Visiting Professor, Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA (Host: [Professor Francis Halzen](#))
- **April 2022 - December 2022:**  
Fulbright-Nehru Fellow, Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA (Host: [Professor Francis Halzen](#))

- **July 2019 - till date:**  
Associate Professor - G at Institute of Physics, Bhubaneswar, Odisha, India
- **July 2014 - June 2019:**  
Reader-F at Institute of Physics, Bhubaneswar, Odisha, India
- **January 2013 - June 2014:**  
Assistant Professor at Institute of Physics, Bhubaneswar, Odisha, India
- **October 2010 - December 2012:**  
Post-Doctoral Research Associate, Instituto de Física Corpuscular, University of Valencia, Valencia, Spain ([Supervisor: Professor Pilar Hernández](#))
- **October 2008 - September 2010:**  
Post-Doctoral Research Associate, Physics Department, Virginia Tech, Blacksburg, USA ([Supervisor: Professor Patrick Huber](#))

## Education

- **Ph.D. from University of Calcutta, Kolkata, India (Sept. 2003 - Sept. 2008)**  
Thesis Title: Some Aspects of Neutrino Mixings and Oscillations  
[Supervisor: Professor Amitava Raychaudhuri \(Dept. of Physics, Univ. of Calcutta\)](#)
- **M.Sc. from University of Calcutta, Kolkata, India (2001 - 2003)**
- **B.Sc. from Scottish Church College, Kolkata, India (1998 - 2001)**

## Awards/Honours/Fellowships/Research Grants

- [Elected as a Fellow of the National Academy of Sciences, India \(NASI\)](#)
- [Selected to deliver the First Prof. Raviapati Raghavarao Memorial Lecture at PRL on 21st February 2025](#)
- [Rajib Goyal Young Scientist Prize for the year 2021-2022 in the Physical Science category by the Kurukshetra University, Kurukshetra, Haryana, India \(announced in March 2024\)](#)
- [Appointed as an Honorary Fellow of the Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA](#)

- **Fulbright-Nehru Academic and Professional Excellence Fellowship (FNAPE) to conduct research work on “Massive Neutrinos” at the University of Wisconsin-Madison, Madison, WI, USA (March 2022 to December 2022)**
- **Associate Membership of the Abdus Salam International Centre for Theoretical Physics (ICTP) for Six Years (2022 to 2027)**
- **Featured in the Coffee Table Book titled “75 Scientists under 50” as a part of the Golden Jubilee Celebrations of the Department of Science and Technology (DST), Govt. of India**
- **The N. S. Satya Murthy Memorial Award 2020 by the Indian Physics Association (IPA)**
- **The Department of Science and Technology (DST) Swarnajayanti Fellowship 2020-2025**
- **Research Grant of Rs. 1 Crore (Approx. \$120K) from the Science and Engineering Research Board (SERB), Government of India to pursue research in the field of neutrino physics for the duration 2020-2025**
- **The B. M. Birla Science Prize in Physics for the year 2018 by the B. M. Birla Science Centre (sole winner of this award for 2018, announced on 10th January 2020)**
- **Young Scientist Research Grant for three years (2018 to 2021) from Indian National Science Academy (INSA)**
- **Recipient of the NASI Scopus Young Scientist Awards 2016 - Physics category**
- **Appointed as Simons Associate of The Abdus Salam International Centre for Theoretical Physics (ICTP) from 1st January 2015 to 31st December 2021**
- **Awarded with the National Academy of Sciences (NASI) - Young Scientist Platinum Jubilee Award (2014)**
- **Awarded with the Indian National Science Academy (INSA) Medal for Young Scientists - 2014**
- **Awarded with the Associateship of the Indian Academy of Sciences, July 2013**

- **Recipient of DST/INSPIRE Faculty Award [IFA-PH-12], 11th May 2012**  
(Only availed the Research Grant from this award)
- **Best student award of NuFact 2007 Summer School (KEK, Tsukuba, Japan)**

## Research Interests

- **Neutrino Oscillation Phenomenology**  
(Long-baseline neutrinos, Solar and Atmospheric neutrinos, Reactor neutrinos)
- **Probing the Earth's interior using atmospheric neutrinos**
- **Neutrino Astronomy**  
(Flavor Ratio of High-Energy Astrophysical Neutrinos)
- **Phenomenology with Light Sterile Neutrinos**
- **Analysis of IceCube DeepCore data & physics simulation studies related to IceCube Upgrade**
- **Physics and Detector Simulation Studies related to the Iron Calorimeter (ICAL) detector at the India-based Neutrino Observatory (INO) facility, Deep Underground Neutrino Experiment (DUNE) in USA, Tokai to Hyper-Kamiokande (T2HK) Experiment in Japan**
- **Direct and Indirect Searches of Dark Matter**
- **Beyond the Standard Model studies (Lepton Number and Flavor Violation)**
- **RGE and possible connection between CKM and PMNS matrix**
- **Neutrino Event Generator (GENIE) & Detector simulation with GEANT4 package**

## Publication Details

**According to Google Scholar: h-index is 37 and i10-index is 105**

- **Papers published in peer-reviewed journals (75)**
- **Papers communicated to peer-reviewed journals (1)**

- **Unpublished papers (7)**
- **Working group reports (13)**
- **Conference proceedings (33)**

## Mentoring

- **Ph.D. Students**

Dr. Sabya Sachi Chatterjee, Ph.D. Completed in 2018 (Now Postdoc at KIT, Karlsruhe, Germany)

Dr. Amina Khatun, Ph.D. Completed in 2019 (Now Postdoc at Comenius University, Bratislava, Slovakia)

Dr. Anil Kumar, Ph.D. Completed in 2022 (Now Postdoc at DESY, Zeuthen, Germany)

Dr. Sudipta Das, Ph.D. Completed in 2024 (Now Postdoc at University of Iowa, Iowa City, Iowa, USA)

Dr. Masoom Singh, Ph.D. Completed in 2024

Mr. Pragyanprasu Swain, IOP Ph.D. Student, Thesis Synopsis Submitted in October 2024

Mr. Sadashiv Sahoo, INO Ph.D. Student, Thesis Synopsis Submitted in October 2024

Mr. Ritam Kundu, IOP Ph.D. Student, Thesis Synopsis Submitted in December 2024

Ms. Sharmistha Chattopadhyay, IOP Ph.D. Student, Started in March 2022

Mr. Anuj Upadhyay, DST/INSPIRE Ph.D. Fellow, Started in August 2021

Mr. Krishnamoorthi Jayakumar, Senior Research Fellow under the DST-SERB Swarnajayanti Project, Started in April 2022

Mr. Gopal Garg, DST/INSPIRE Ph.D. Fellow, Started in April 2023

- **Master's Thesis**

Ms. Nityasa Mishra, BITS Pilani, 1st June to 31st December 2017

Mr. Aman Gupta, IIT Roorkee, July 2017 to May, 2018

- **Summer Project Students**

Mr. Md Ful Hossain Sk (Aligarh Muslim University), 16th May to 24th July 2019

Mr. Sujit Kumar Sahoo (Indian Institute of Technology (ISM) Dhanbad), 16th May to 22nd July 2019

Ms. Nimmy Alex Sarah (Assumption College, Kottayam), 14th May to 9th July 2019

Ms. Nandana Rajeev (Mar Athanasius College, Kothamangalam), 14th May to 9th July 2019

Mr. Anuj Upadhyay (Aligarh Muslim University), 19th June to 7th August 2018

Mr. Ashish Narayan (NIT Rourkela), 21st June to 21st July 2018

Ms. Priyanka Baghel (Central University of Haryana), 21st June to 20th July 2018

Mr. Aman Gupta (IIT Roorkee), May to July 2017

Mr. Paras Koundal (IISER Mohali), May to July 2017

Ms. Tanvi Wamorkar (Delhi University), May to July 2013

- **Postdocs/Visitors**

Dr. Atanu Maulik, mini-DINO Dark Matter Project, April 2014 to February 2015

Dr. Arnab Dasgupta, May 2015 to May 2017

Dr. C. Soumya, 11th February 2020 to 11th August 2021 (NPDF from DST-SERB)

Dr. Mehedi Masud, October 2019 to September 2020

Mr. Manoranjan Dutta, March to June 2018

Mr. Aman Gupta, August to December 2018

Mr. Anuj Upadhyay, July to October 2019

Dr. Samiran Roy, November 2021 to February 2022

Dr. Ashish Narang, 10th September 2021 - 13th December 2024

Dr. R. Thiru Senthil, 10th June 2024 - 13th December 2024

## Reviewer of the Journals

- **Journal of High Energy Physics [JHEP]**
- **European Physical Journal C [EPJC]**
- **Modern Physics Letters A [MPLA]**
- **Universe**
- **Advances in High Energy Physics [AHEP]**

## Service to the Community

- **Organizer of an event called “IceCube MasterClass at IOP: Be a Scientist for a Day” on 27th February 2025**  
[https://www.iopb.res.in/awards\\_files/Ice\\_Cube\\_Master\\_Class.pdf](https://www.iopb.res.in/awards_files/Ice_Cube_Master_Class.pdf)
- **One of the co-chairs of the Neutrino Physics conference to be held at the ICISE centre in Quy Nhon, Vietnam, from 21st to 25th July 2025**  
<https://www.icisequynhon.com/conference-calendar/>
- **One of the conveners of Working Group - 1 (Neutrino Oscillation Physics) of NuFact 2024 International Workshop which was held at the Argonne National Laboratory (ANL), Illinois, USA, from 16th to 21st September 2024**  
<https://indico.fnal.gov/event/63406/>
- **Organizer of the international workshop on “Multi-messenger Tomography of Earth (MMTE 2023)” which was held at APC-Université Paris Cité, Paris, France, from 4th to 7th July 2023**  
<https://indico.in2p3.fr/event/30001/>
- **Organizer of the international workshop on “Multi-messenger Tomography of Earth (MMTE 2022)” which was held at The Cliff Lodge at Snowbird, Salt Lake City, Utah, USA, during 30th to 31st July, 2022**  
<https://indico.fnal.gov/event/53004/page/2944-multi-messenger-tomography-of-earth-mmte-2022-workshop>
- **Convenor of the Theoretical Physics Seminar Circuit (TPSC) at Institute of Physics, Bhubaneswar**  
<http://newweb.bose.res.in/LinkageProgrammes/TPSC/CentersConvenors.jsp>

- **One of the main organizers of the International Online Workshop on Outlook for INO, IICHEP, and Beyond, TIFR, Mumbai, India, 19th to 20th February, 2021**  
<https://indico.ino.tifr.res.in/event/583/>
- **One of the conveners of Working Group - 5 (Neutrinos Beyond PMNS) of NuFact 2018 International Workshop which was held at the Physics Department of Virginia Tech, Blacksburg, USA, from 12th to 18th August 2018**  
<https://nufact2018.phys.vt.edu>
- **Organized the advanced workshop on ‘Physics of Atmospheric Neutrinos - PANE 2018’ which was held at ICTP, Trieste, Italy from 28th May to 1st June 2018**  
<http://indico.ictp.it/event/8312/>
- **Organized a Colloquium Series (five colloquiums) at IOP in the memory of our beloved Professor Durga Prasad Roy in November 2017**  
<http://www.iopb.res.in/dprc.pdf>
- **One of the conveners of Working Group - 5 (Neutrinos Beyond PMNS) of NuFact 2017 International Workshop which was held at the Uppsala University, Uppsala, Sweden from 25th to 30th September 2017**  
<https://indico.uu.se/event/324/>
- **Organizer of the Indo-Japan Neutrino Meeting at IOP, Bhubaneswar on 15th May 2017**  
<http://www.iopb.res.in/ijnm2017>
- **Convener of the High Energy Physics (HEP) school on LHC and Neutrinos – Probing the frontiers of particle physics with Neutrinos and LHC from 17th October to 21st October 2016 at the Institute of Physics, Bhubaneswar**  
<http://www.iopb.res.in/hepschool2016/>
- **One of the conveners of Working Group - 5 (Neutrinos Beyond PMNS) of NuFact 2016 International Workshop which was held at ICISE, Quy Nhon, Vietnam from 21st to 27th August 2016**  
<http://vietnam.in2p3.fr/2016/nufact/>
- **One of the main organizers of the academic visit of B.Sc. Physics (Hons.) final year students from S.B.R. Govt. (Autonomous) Women’s College, Berhampur, Odisha to celebrate National Science Day 2016 at IOP, Bhubaneswar on 28th February 2016**

- **Convener of Working Group – III (Neutrino Physics) of Workshop on High Energy Physics Phenomenology (WHEPP XIV) which was held during 4th to 13th December, 2015 at Indian Institute of Technology – Kanpur, India**  
<http://www.iitk.ac.in/phy/activities/2015-2016/whepp/>
- **One of the main organizers of COSMOASTRO15 – Discussion Meeting on Cosmology and Astro-Particle Physics from 30th October to 5th November 2015 at the Institute of Physics, Bhubaneswar**  
<http://www.iopb.res.in/~cosmoastro15/>
- **Coordinator of the science outreach event for school and college students held at IOP on 1st February 2015 to celebrate the Diamond Jubilee of the Department of Atomic Energy (DAE)**  
<http://www.iopb.res.in/~outreach/>
- **Panel discussion on the India-based Neutrino Observatory project with the students at TIFR, Mumbai organized by Rajyasabha TV (RSTV)**  
<https://www.youtube.com/watch?v=RWQaqvwMKdQ>

## Professional Memberships

- **Member of the IceCube Collaboration**  
(Actively involved in the analysis of IceCube-DeepCore data and physics simulation studies related to IceCube-Upgrade)  
<https://icecube.wisc.edu>
- **Member of the India-based Neutrino Observatory (INO) Collaboration**  
(Actively involved in the physics and detector simulation studies)  
<http://www.ino.tifr.res.in/inol>
- **Life Member of the Indian Physics Association (IPA)**  
<https://www.tifr.res.in/~ipa1970/>
- **Member of the DAE Vision Scheme - 7 (Mega Science) Sub-committee**  
(Helping Project Appraisal Committee constituted by Secretary, DAE)

- **Member of the International Design Study for the Neutrino Factory**

*<https://www.ids-nf.org/wiki/FrontPage>*

## Teaching/Lectures

- **One lecture (1 hour) on “Neutrino Physics with IceCube” during the School on Experimental Astroparticle Physics (SEAP - 2025), Cosmic Ray Laboratory - TIFR, Ooty, The Nilgiris, Tamil Nadu, India, 12th March 2025**
- **High Energy Physics Course for the Pre-Doctoral Students of IOP, 15th January to date**
- **Two lectures (1.5 hours each) on “Neutrino Phenomenology” during the 8th Vietnam School on Neutrinos, ICISE, Quy Nhon, Binh Dinh, Vietnam, 16th to 17th July 2024**
- **Three lectures (1 hour each) on “Neutrino Phenomenology” during the neutrino school “Understanding the Universe through Neutrinos”, ICTS-TIFR, Bengaluru, Karnataka, India, 29th April to 1st May, 2024**
- **Two lectures (1.5 hours each) on “Neutrino Phenomenology” during the 7th Vietnam School on Neutrinos, ICISE, Quy Nhon, Binh Dinh, Vietnam, 20th to 21st July, 2023**
- **One lecture (30 minutes) on “Neutrino Physics and Oscillations” during the IceCube Summer School, Wisconsin IceCube Particle Astrophysics Center, Madison, Wisconsin, USA, 5th June, 2023**
- **One lecture (30 minutes) on “Neutrino Oscillations and Beyond the Standard Model Physics” during the IceCube Bootcamp, Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA, 15th June 2022**
- **One lecture (1 hour) on “A Preamble to Neutrinos” during the PtRC Project Outreach Training Program, IICHEP, Madurai, Tamil Nadu, India, 18th September, 2021**
- **One lecture (1.5 hours) on “Phenomenology of Light Sterile Neutrino” during the Vietnam Neutrino School, ICISE, Quy Nhon, Vietnam, 8th September, 2021**

- **One lecture (1.5 hours) on “Present and Future of Neutrino Oscillations” during the Virtual HEP-PHENO School, 5th September 2021**
- **One lecture (1 hour) on “A Preamble to Neutrinos” during the PtRC Project Outreach Training Program, IICHEP, Madurai, Tamil Nadu, India, 2nd September, 2021**
- **Six lectures (1.5 hours each) on Neutrino Physics during the Science Academies’ Refresher Course on “Frontiers of Theoretical Physics” (SARCFTP), sponsored by the Indian Academy of Sciences (IASc), Indian National Science Academy (INSA), and the National Academy of Sciences (NASI), India and organised by the Physics Department, Assam Don Bosco University from 10th to 12th February 2021**
- **Particle Physics Course for the Pre-Doctoral Students of IOP, January to July 2020**
- **Two lectures (1.5 hours each) on “Phenomenology of Light Sterile Neutrino” during the Vietnam Neutrino School, ICISE, Quy Nhon, Vietnam, 16th to 17th July 2019**
- **Three lectures (1.5 hours each) on Neutrino Physics during the SERB School on Experimental High Energy Physics, TIFR, Mumbai, India, 24th to 26th January 2019**
- **Particle Physics Course for the Pre-Doctoral Students of IOP, January to May 2019**
- **Act as a tutor for Neutrino Physics Course during XIth SERC School on Experimental High Energy Physics at NISER, Bhubaneswar, 21st November, 2017**
- **Particle Physics Course for the Pre-Doctoral Students of IOP, March to May 2016**
- **Particle Physics Course for the Pre-Doctoral Students of IOP, March to May 2015**
- **Particle Physics Course for Pre-Doctoral Students of IOP, February to April 2014**

## **Colloquiums, Seminars, and Invited Talks**

### **1. Exciting Journey into the World of Invisible Neutrinos**

Talk given at the IceCube MasterClass 2025, Institute of Physics, Bhubaneswar, Odisha, India, 27th March 2025

2. **Imaging the Deep Earth with Neutrinos**  
First Professor Ravipati Raghavarao Memorial Lecture, Physical Research Laboratory (PRL), Ahmedabad, Gujarat, India, 21st February 2025
3. **Highlights from the IceCube Neutrino Observatory**  
Invited plenary talk given at the XXVI DAE-BRNS HEP Symposium 2024, Banaras Hindu University, Varanasi, Uttar Pradesh, India, 23rd December 2024
4. **Imaging the Deep Earth with Neutrinos**  
Invited plenary talk given at the BCVSPIN Conference 2024, Tribhuvan and Kathmandu University, Kathmandu, Nepal, 12th December 2024
5. **Science Learning**  
Invited talk given at the Children's Day Celebration, Institute of Physics, Bhubaneswar, Odisha, India, 14th November 2024
6. **Neutrino Tomography of Earth**  
Invited plenary talk given at the "Vitalizing Indian Earth Science" meeting, Indian Academy of Sciences, Bengaluru, Karnataka, India, 26th October 2024
7. **Neutrino Tomography of Earth**  
Invited plenary talk given at the DAE Conclave 2024, NISER, Bhubaneswar, Odisha, India, 25th October 2024
8. **Neutrino Astrophysics to Particle Physics with IceCube**  
Invited plenary talk given at the XVII International Conference on Interconnections between Particle Physics and Cosmology (PPC 2024), Indian Institute of Technology Hyderabad, Hyderabad, Telangana, India, 15th October 2024
9. **Looking inside the Earth with Neutrinos**  
Invited talk given during the Hindi Fortnight Celebration at Institute of Physics, Bhubaneswar, Odisha, India, 28th September 2024
10. **A journey into the interior of Earth with Neutrinos**  
Seminar given at the Department of Physics, Kurukshetra University, Kurukshetra, Haryana, India, 6th September 2024
11. **Neutrino Astrophysics to Particle Physics with IceCube**

Invited plenary talk given at the Workshop on Dark Matter and Astroparticle Physics (WDMAP), Institute of Physics, Bhubaneswar, Odisha, India, 8th August 2024

12. **Beyond the Standard Model Searches in Neutrino Experiments**

Invited parallel talk given at the PASCOS 2024 conference, ICISE, Quy Nhon, Vietnam, 10th July 2024

13. **Recent Results from the IceCube Neutrino Observatory**

Invited plenary talk given at the PASCOS 2024 conference, ICISE, Quy Nhon, Vietnam, 8th July 2024

14. **Neutrino Sources: From meV to EeV**

Invited talk given at the Radio Neutrino & Cosmic Rays Astronomy Workshop, Aligarh Muslim University, Aligarh, Uttar Pradesh, India, 18th April 2024

15. **Probing the Earth's Interior with Neutrinos**

Nuclear and Particle Physics seminar given at the Department of Physics and Astronomy, University of Iowa, Iowa City, Iowa, USA, 4th March 2024

16. **A journey into the interior of Earth with Neutrinos**

Special HEP seminar given at the Physics & Astronomy Department, Northwestern University, Evanston, Illinois, USA, 12th January 2024

17. **Neutrino Oscillation Parameters: Present and Future**

Invited talk given at the 16th International Conference on Heavy Quarks and Leptons (HQL 2023), TIFR, Mumbai, Maharashtra, India, 29th November 2023

18. **Looking inside the Earth with Neutrinos**

Invited talk given at the NCRAMPP-2023 conference, P.G. Dept. of Physics, Berhampur University, Berhampur, Odisha, India, 25th November 2023

19. **Imaging the Earth with Atmospheric Neutrinos**

Invited talk given at the IRCHEP 1402 conference, School of Physics, IPM, Tehran, Iran, 22nd November 2023

20. **IceCube: Highlights and Prospects**

Invited talk given at the GW-EM-Nu-2023 conference, TIFR, Mumbai, Maharashtra, India, 20th November 2023

21. **A journey into the interior of Earth with Neutrinos**  
Colloquium given at the Physics Department, University of Hawaii at Manoa, Honolulu, Hawaii, USA, 9th November 2023
22. **Imaging the Deep Earth with Neutrinos**  
Webinar given at the Department of Physics and Geophysics, Kurukshetra University, Kurukshetra, Haryana, India, 27th October 2023
23. **Exploring Earth Matter Effects and features of PREM with IceCube Upgrade**  
Talk given at the Fall 2023 IceCube Collaboration Meeting, Grand Rapids, MI, USA, 19th October 2023
24. **Neutrino Tomography: A journey into the interior of Earth**  
Colloquium given at the Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA, 6th October 2023
25. **Unmatched Precision on Neutrino Oscillation Parameters using Complementarity between DUNE and T2HK**  
N3AS Online Seminar, Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA, 8th August 2023
26. **Present Status and Future Prospects of a Light eV-Scale Sterile Neutrino**  
Invited talk given at the Neutrino Workshop, IFIRSE, ICISE, Quy Nhon, Vietnam, 18th July 2023
27. **Unprecedented Precision on Neutrino Oscillation Parameters using Synergy between DUNE and T2HK**  
Invited talk given at the WIN 2023 conference, Sun Yat-sen University Zhuhai Campus, Zhuhai, China, 7th July 2023
28. **Probing the interior of Earth using neutrino oscillations in IceCube-DeepCore**  
Invited talk given at the “Multi-messenger Tomography of Earth (MMTE 2023)” workshop, APC-Université Paris Cité, Paris, France, 5th July 2023
29. **Landscape of CP Violation in Long-baseline Experiments**  
NPAC Seminar, Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA, 27th April 2023

30. **Imaging the Deep Earth with Neutrinos**  
Invited talk given at the Department of Physics, Odisha University of Technology and Research, Bhubaneswar, Odisha, India, 7th December 2022
31. **Multi-Messenger Tomography of Earth**  
Invited talk given at the IceCube Collaboration Meeting, Madison, Wisconsin, USA, 21st September, 2022
32. **Summary of “Multi-Messenger Tomography of Earth (MMTE 2022)” Workshop**  
Invited talk given at the NuFact 2022 Conference, The Cliff Lodge at Snowbird, Salt Lake City, Utah, USA, 4th August 2022
33. **Earth’s Matter Effect in Neutrino Oscillation**  
Talk given at the “Multi-messenger Tomography of Earth (MMTE 2022)” workshop, The Cliff Lodge at Snowbird, Salt Lake City, Utah, USA, 31st July, 2022
34. **Complementarity among Next-generation Long-baseline Experiments**  
Invited talk given at the Snowmass Summer Meeting, University of Washington, Seattle, USA, 19th July 2022
35. **Core-passing atmospheric neutrinos: a unique probe to discriminate between Lorentz violation and non-standard interactions**  
Talk given at the WIPAC Group Meeting, Madison, Wisconsin, USA, 8th July, 2022
36. **Imprints of Lorentz Violation in Neutrino Oscillation Experiments**  
NPAC Seminar, Physics Department, University of Wisconsin-Madison, Madison, Wisconsin, USA, 7th July, 2022
37. **Lorentz Violation in Neutrino Oscillations**  
Invited talk given at the Ninth Meeting on CPT and Lorentz Symmetry, Indiana University, Bloomington, Indiana, USA, 26th May 2022
38. **Cutting Edge Research with Invisible Neutrinos**  
Invited talk given at the National Science Day Celebration, Physics Department, Tezpur University, Assam, India, 1st March 2022
39. **New Opportunities at Future Long-Baseline Experiments**  
Invited Plenary talk given at the IRCHEP 1400 Online Conference, School of Physics, IPM, Tehran, Iran, 9th November, 2021

40. **Physics with Atmospheric Tau Neutrino at ICAL-INO**  
Invited Plenary talk given at the NuTau2021 Workshop, BNL, Upton, USA, 1st October, 2021
41. **Exploring BSM Physics at Neutrino Oscillation Experiments**  
Invited Plenary talk given at the NuFact 2021 Conference, Cagliari, Italy, 10th September, 2021
42. **Landscape of BSM Physics at Neutrino Experiments**  
Invited Plenary talk given at the 20th Lomonosov Conference, Moscow State University, Moscow, Russia, 25th August, 2021
43. **Probing the Earth's Core using Atmospheric Neutrinos at INO**  
Talk given at the EPS-HEP Conference 2021, University of Hamburg/DESY, Germany, 29th July, 2021
44. **Dream Big in 2021 with India-based Neutrino Observatory**  
Webinar given at the SASTRA University, Thanjavur, Tamil Nadu, India, 6th January, 2021
45. **Exciting Journey of Oscillating Neutrinos**  
Webinar given at the Department of Physics, Scottish Church College, Kolkata, India, 17th December, 2020
46. **BSM Searches in Neutrino Experiments**  
Invited Plenary talk given at the Neutrino 2020 Online Conference, Fermilab, Chicago, USA, 24th June, 2020
47. **Search for Sterile Neutrino**  
Online Neutrino Lecture Series by the INO Collaboration, 15th May 2020
48. **India-based Neutrino Observatory: Present Status and Physics Goals**  
Invited talk given at the International Conference on Synergy of Sciences (ICSS - 2020), SASTRA Deemed University, Thanjavur, Tamil Nadu, India, 29th February, 2020
49. **Massive Neutrinos: A Window for Physics Beyond the Standard Model**  
Invited talk given at the Winter Astronomy School, B. M. Birla Science Centre, Hyderabad, India, 18th February, 2020

50. **Physics Goals of ICAL**

Plenary talk given at the INO Collaboration meeting, TIFR, Mumbai, India, 16th November, 2019

51. **Matter Effect in Long-baseline Experiments**

Invited talk given at the Prospects of Neutrino Physics Workshop, Kavli IPMU, Kashiwa, Japan, 12th April 2019

52. **India-based Neutrino Observatory: Present Status and Physics Reach**

Invited talk given at the Prospects of Neutrino Physics Workshop, Kavli IPMU, Kashiwa, Japan, 11th April 2019

53. **Neutrino Oscillation: Present Status and Future Prospects**

Invited talk given at the National Seminar on Recent Advances in Physics (NSRAP-2019), P.G. Department of Physics, Berhampur University, Berhampur, Odisha, India, 23rd March, 2019

54. **Discussion on Light Sterile Neutrino**

IITB - ICTP Workshop on Neutrino Physics, IIT Bombay, Mumbai, India, 14th December, 2018

55. **Atmospheric  $\nu$  Oscillation: Celebrating 20 years of Super-K Discovery & Beyond**

Seminar given at ICTP, Trieste, Italy, 17th September, 2018

56. **Addressing Neutrino Mixing Models with T2HK and DUNE**

Invited talk given at the Neutrino Oscillation Workshop (NOW) 2018, Ostuni, Italy, 14th September, 2018

57. **Neutrino Physics: An Introduction**

Two pedagogical lectures were given during the Lecture Workshop on High Energy Physics at Department of Physics, Maharajah's College (Autonomous), Vizianagaram, Andhrapradesh, India, 9th to 10th August, 2018

58. **Oscillation with Three Active and One Light Sterile Neutrinos**

Seminar given at ICTP, Trieste, Italy, 7th June, 2018

59. **Sensitivity of Long-baseline Experiments with a Sterile Neutrino**

Seminar given at INFN Padova, Padova, Italy, 25th May, 2018

60. **Light eV-scale Sterile Neutrino in Long-baseline Experiments**  
Seminar given at INFN Rome, Rome, Italy, 14th May, 2018
61. **Atmospheric Neutrinos: Status and Prospects**  
Invited talk given at the Nu HoRIZons VII Conference, HRI, Allahabad, India, 21st February 2018
62. **Recent Developments in Neutrino Oscillations and Future Outlook**  
Invited Plenary talk given at WHEPP XV workshop, IISER Bhopal, Bhopal, India, 20th December, 2017
63. **Indirect Searches of Galactic Diffuse Dark Matter in INO-MagICAL Detector**  
Talk given at the NuFact 2017 Conference, Uppsala University, Uppsala, Sweden, 28th September, 2017
64. **Can New Physics spoil the measurement of Octant of  $\theta_{23}$ ?**  
Seminar given at ICTP, Trieste, Italy, 21st September, 2017
65. **Can we probe Octant of  $\theta_{23}$  in presence of New Physics?**  
Seminar given at the Laboratori Nazionali del Gran Sasso (LNGS), Assergi, Italy, 8th September, 2017
66. **Non-Standard Interactions in Borexino and Daya Bay**  
Invited talk given at the workshop on Recent Developments in Neutrino Physics and Astrophysics, LNGS, Assergi, Italy, 5th September, 2017
67. **Known and Unknown Parameters in Neutrino Oscillation**  
Talk given during UGC-DRS Sponsored National Seminar on Current Trends in Physics at Department of Physics, Utkal University, Bhubaneswar, Odisha, India, 31st March, 2017
68. **India-based Neutrino Observatory: The Search for Invisible Neutrinos**  
Talk given during DST- Inspire Internship Programme at School of Biotechnology, KIIT University, Bhubaneswar, India, 13th January, 2017
69. **Fundamental Unknowns in Neutrino Oscillation and their Future**  
Seminar given at ICTP, Trieste, Italy, 13th December, 2016

70. **Addressing Fundamental Unknowns in Neutrino Oscillation**  
Seminar given at Istituto Nazionale di Fisica Nucleare (INFN), Milan, Italy, 29th November, 2016
71. **Neutrino Oscillation Parameters: Present Status and Future Roadmap**  
Invited talk given at the 82nd Annual Meeting of Indian Academy of Sciences, IISER Bhopal, Bhopal, 4th November, 2016
72. **Neutrino Mass Hierarchy and CP-violation: How to get them?**  
Invited talk given at the workshop on New Frontiers in Electroweak Interactions of Leptons and Hadrons, Aligarh Muslim University, Aligarh, India, 2nd November, 2016
73. **A Thrilling Journey into the World of Neutrinos**  
Invited talk given at the Department of Physics, College of Engineering and Technology (CET), Techno Campus, Bhubaneswar, 22nd October, 2016
74. **Three-Flavor Oscillations**  
Pedagogical lecture given during the High Energy Physics (HEP) School on LHC and Neutrinos at Institute of Physics, Bhubaneswar, 20th October, 2016
75. **Working Group 5 (Neutrinos Beyond PMNS) Summary Talk**  
Talk given at the NuFact 2016 Conference, Quy Nhon, Vietnam, 27th August, 2016
76. **Impact of Light Sterile Neutrinos at Long-baselines**  
Talk given at the NuFact 2016 Conference, Quy Nhon, Vietnam, 26th August, 2016
77. **Physics Reach of DUNE in 3+1 Scheme**  
Talk given at the DUNE Physics Working Group meeting, Fermilab, USA, 26th April 2016
78. **Neutrino Mass Hierarchy and CP-violation: Future Prospects**  
Invited talk was given at the PHENO1@IISERM workshop, IISER Mohali, 6th April 2016
79. **The Race for Neutrino Mass Hierarchy**  
Invited talk was given at the Frontiers in High Energy Physics III meeting, IMSc, Chennai, 22nd March 2016

80. **Future Prospects for Mass Hierarchy Discovery**  
Invited talk was given at the Nu HoRIZons VI Conference, HRI, Allahabad, 17th March 2016
81. **Opening a New Era in Neutrino Physics**  
Invited talk given at the School of Physics, Sambalpur University, Odisha, India, 19th February, 2016
82. **Flavor-Dependent Long-Range Forces in Long-Baseline Experiments**  
Talk given at the DUNE Physics Working Group meeting, Fermilab, USA, 13th October 2015
83. **Can Daya Bay Probe Non-Standard Neutrino Interactions?**  
Invited talk given at the IPP15 Conference, School of Physics, IPM, Tehran, Iran, 27th September, 2015
84. **Unraveling Neutrino Properties at the India-based Neutrino Observatory**  
Talk given at the Internal Symposium of the Institute of Physics (IOP) to celebrate the 40th year of Academic Activities, Bhubaneswar, Odisha, India, 27th August, 2015
85. **Standard and Non-Standard Oscillation Physics at ICAL-INO**  
Talk given at the Crossroads of Neutrino Physics Workshop, MITP, Johannes Gutenberg University, Mainz, Germany, 28th July, 2015
86. **Roadmap for Neutrino Mass Hierarchy**  
Plenary talk was given at the INO Collaboration meeting, IIT Madras, Chennai, India, 3rd April 2015
87. **Constraining Active - Sterile mixing at ICAL detector with atmospheric neutrinos**  
Talk given at the INO Collaboration meeting, IIT Madras, Chennai, India, 2nd April 2015
88. **Probing Non-Standard Interactions at Daya Bay**  
Seminar given at the Centre for Theoretical Physics, Jamia Millia Islamia, New Delhi, India, 9th March, 2015
89. **Talking to Neutrinos at the India-based Neutrino Observatory (INO)**  
Colloquium given at the Centre for Theoretical Physics, Jamia Millia Islamia, New Delhi, India, 5th November, 2014

90. **Projected Sensitivity from ICAL + LBL Experiments**  
Talk given at the INO Collaboration meeting, IICHEP, Madurai, India, 18th September, 2014
91. **Exploring Neutrino Properties at the India-based Neutrino Observatory (INO)**  
Colloquium given at the Utkal University, Bhubaneswar, India, 6th September, 2014
92. **Neutrino Properties from Recent Reactor and Accelerator Experiments**  
Seminar given at the Alumni Day Celebration, Institute of Physics, Bhubaneswar, India, 3rd September, 2014
93. **Recent Developments in Neutrino Oscillations & Future Roadmap**  
Seminar given at Tata Institute of Fundamental Research (TIFR), Mumbai, India, 22nd August, 2014
94. **Enhancing Sensitivity to Neutrino Parameters with Inelasticity measurement in Atmospheric Neutrinos at ICAL-INO**  
Seminar given at IFIC, University of Valencia, Valencia, Spain, 10th July, 2014
95. **India-based Neutrino Observatory (INO)**  
Invited talk given at the ICHEP 2014 Conference, Valencia, Spain, 4th July, 2014
96. **Implications of Recent Measurements in Neutrino Sector & Future Directions**  
Colloquium given at the APC Laboratory, Paris, France, 27th June, 2014
97. **Overview of Currently Running Reactor and Accelerator Experiments**  
Invited plenary talk given at the Global Neutrino meeting, Paris, France, 23rd June, 2014
98. **Statistical Significance of Mass Hierarchy in Future Experiments**  
Invited plenary talk given at the INO Collaboration meeting, VECC, Kolkata, India, 5th April 2014
99. **Neutrino Oscillation Experiments: Latest Results & Future Roadmap**  
Invited talk given at WHEPP 2013 workshop, Puri, Orissa, India, 15th December, 2013
100. **Neutrino Program in India**

Invited talk was given at the ICFA Neutrino Panel: Asian Neutrino Community Meeting, Kavli IPMU, Kashiwa, Japan, 13th November 2013

101. **Status and Prospects of India-based Neutrino Observatory**

Invited plenary talk given at the NNN13 International Workshop, Kavli IPMU, Kashiwa, Japan, 12th November, 2013

102. **Recent Advances in Neutrino Physics and Future Roadmap**

Talk given at Institute of Physics, Bhubaneswar, India, 26th September, 2013

103. **Implications of Recent Measurements in Neutrino Sector and Future Directions**

Invited plenary talk given at the International Conference on ‘Triggering Discoveries in High Energy Physics’, University of Jammu, India, 10th September, 2013

104. **Resolving  $\theta_{23}$  Octant in Current and Future Oscillation Facilities**

Invited talk given at the NUFACT 2013 workshop, Institute of High Energy Physics (IHEP), Beijing, China, 20th August, 2013

105. **India-based Neutrino Observatory**

Talk given at Institute of Physics, Bhubaneswar, India, 24th May, 2013

106. **Three Flavor Effects in Current and Future Oscillation Facilities**

Invited plenary talk given at the IPM international school and workshop on Particle Physics (IPP13), Tehran, Iran, 4th May, 2013

107. **Electroweak Measurements with nuSTORM**

Talk given at the nuSTORM workshop, Virginia Tech, Blacksburg, USA, 14th April, 2013

108. **Expectations from T2K and NO $\nu$ A in light of recent Neutrino Data**

Talk given at the e-NuMI phone meeting, Fermilab, USA, 27th February, 2013

109. **Status of Sterile Neutrinos**

Invited review talk given at the XX DAE-BRNS HEP symposium, Visva-Bharati, Santiniketan, India, 15th January, 2013

110. **New Physics Searches with  $^7\text{Be}$  Solar Neutrinos**

Talk given at the IVICFA Theoretical Physics Mini-Workshops, Instituto De Fisica Corpuscular, Valencia, USA, 16th November, 2012

111. **Searching for New Physics at Borexino**

Talk given at Virginia Tech, Blacksburg, Virginia, USA, 20th October, 2012

112. **Elastic Neutrino-Electron scattering in near detectors**

Invited talk given at the 9th IDS-NF Plenary meeting, Fermilab, USA, 9th October, 2012

113. **Probing Non-Standard Interactions with Borexino**

Invited talk given at the IPP12 workshop, School of Physics, IPM, Tehran, Iran, 30th September, 2012

114. **Electro-weak Precision Tests with nuSTORM**

Invited talk was given at the nuSTORM 2012 workshop, Fermilab, USA, 22nd September 2012

115. **Mass Hierarchy in Future Long-baseline Experiments**

Invited talk given at the NOW 2012, Otranto, Lecce, Italy, 15th September, 2012

116. **Mass Hierarchy with Super-K**

Invited talk given at the 4th EUROnu annual meeting, APC, Paris, France, 13th June, 2012

117. **Optimization of Neutrino Factory for large  $\theta_{13}$**

Invited plenary talk at the 4th EUROnu annual meeting, APC, Paris, France, 13th June, 2012

118. **Non-zero  $\theta_{13}$  and Beyond**

Seminar given at Physics Department, Calcutta University, Kolkata, India, 26th April, 2012

119. **Re-optimization of Neutrino Factory for large  $\theta_{13}$**

Talk given at 8th IDS-NF plenary meeting, University of Glasgow, Scotland, 19th April 2012

120. **Sterile Neutrino Searches: Current Status & Future Prospects**

Talk given at Informal pre-meeting of Invisibles at Madrid, Spain, 30th March, 2012

121. **Neutrino Oscillation Parameters: Current Knowledge and Future Goals**

Seminar given at Indian Institute of Science Education and Research Bhopal, 13th February, 2012; Indian Institute of Technology Kanpur, 8th February, 2012; Indian Institute of Science Education and Research Mohali, 2nd February, 2012; Indian Institute of Technology Gandhinagar, 25th January, 2012; Indian Institute of Science Education and Research Pune, 23rd January, 2012; Indian Institute of Technology Bombay, 19th January, 2012; Indian Institute of Technology Madras, 6th January, 2012; Institute of Physics, Bhubaneswar, Orissa, India, 7th December, 2011

122. **Hunt for the Sterile Neutrinos: Present Status & Future Prospects**

Seminar given at Harish-Chandra Research Institute, Allahabad, 7th February, 2012; Saha Institute of Nuclear Physics, Kolkata, 31st January, 2012; Physical Research Laboratory, Ahmedabad, 24th January, 2012; Tata Institute of Fundamental Research, Mumbai, 17th January, 2012; Indian Institute of Mathematical Sciences, Chennai, India, 5th January, 2012

123. **Neutrinos: A Probe of the Universe & Window Beyond the Standard Model**

Colloquium given at Harish-Chandra Research Institute, Allahabad, India, 6th February, 2012

124. **Sterile Neutrino Searches: Current Status & Future Prospects**

Invited talk given at WHEPP XII workshop, Mahabaleshwar, India, 12th January, 2012

125. **Physics Reach of Future Neutrino Oscillation Experiments**

Invited talk given at WHEPP XII workshop, Mahabaleshwar, India, 10th January, 2012

126. **Neutrino Oscillation Parameters: Current Status and Future Prospects**

Colloquium given at Indian Institute of Mathematical Sciences, Chennai, India, 3rd January, 2012

127. **Short and long baseline oscillations with DAR sources and status of DAE $\delta$ ALUS**

Invited plenary talk given at the 12th International Workshop on Next Generation Nucleon Decay and Neutrino Detectors (NNN11), Zurich, Switzerland, 9th November, 2011

128. **Status of the India-based Neutrino Observatory**

Invited plenary talk given at the 12th International Workshop on Next Generation Nucleon Decay and Neutrino Detectors (NNN11), Zurich, Switzerland, 7th November, 2011

129. **Neutrino Oscillation Parameters: Current Knowledge & Future Goals**

Seminar given at the Institut De Physique Nucleaire, Orsay, Cedex, France, 4th November, 2011

130. **Direct Detection of Dark Matter**

Seminar given at Instituto De Fisica Corpuscular, Valencia, Spain, 21st October, 2011

131. **Optimized Neutrino Factory for small and large  $\theta_{13}$**

Invited talk at the NuFact'11 Conference, CERN and University of Geneva, Switzerland, 3rd August 2011

132. **Short Baseline Neutrino Anomalies and Future Probes**

Invited talk in the FLASY 2011 workshop, IFIC, Valencia, Spain, 13th July, 2011

133. **Very Short Baseline Neutrino Oscillation Experiments using Cyclotron Decay-at-Rest Sources**

Invited plenary talk in the GLA2011 workshop, Jyväskylä, Finland, 7th June, 2011

134. **New approach to antineutrino from muon decay at rest**

Invited talk in the Electroweak session of the Rencontres de Moriond, La Thuile, Italy, 19th March 2011

135. **Precision Physics at a Neutrino Factory**

Invited talk in nu HoRIZons IV conference, HRI, Allahabad, India, 24th February, 2011

136. **Neutrino Parameters : Upcoming Experiments & Future Facilities**

Seminar given at Centre for High Energy Physics, IISc, Bangalore, India, 15th February, 2011

137. **Neutrino Parameters : Upcoming Experiments & Future Facilities**

Seminar given at SINP, Kolkata, India, 14th February, 2011.

138. **Optimization of the Neutrino Factory, revisited**

Invited plenary talk at the 3rd EUROnu annual meeting, Rutherford Appleton Laboratory, 20th January 2011

139. **A new concept in long baseline neutrino oscillation experiments**

Seminar given at IFIC-CSIC, University of Valencia, Spain, 15th November, 2010

140. **A new concept in long baseline neutrino oscillation experiments**

Physics Department, University of Maryland, USA, 24th August, 2010

141. **A new approach to anti-neutrino running in long baseline neutrino oscillation experiments**

Seminar given at the Theoretical Physics Department, Fermilab, Batavia, USA, 8th July, 2010

142. **A new approach to anti-neutrino running in long baseline neutrino oscillation experiments**

Seminar given at the Department of Physics & Astronomy, Northwestern University, Evanston, IL, USA, 7th July, 2010

143. **A new approach to anti-neutrino running in long baseline neutrino oscillation experiments**

Seminar given at the Argonne National Lab, Argonne, IL, USA, 6th July, 2010

144. **Ultra-precise leptonic measurement of Weinberg angle**

Invited talk was given at Brookhaven Forum 2010 - A Space-Time Odyssey, Upton, NY, USA, 26th May 2010.

145. **Ultra-precise leptonic measurement of Weinberg angle**

Invited talk given at PHENO 2010 Conference, University of Wisconsin, Madison, USA, 11th May, 2010

146. **Neutrino parameters with a mono-flavor Beta-beam**

Seminar given at the Physics Department, North Carolina State University, Raleigh, NC, USA, 15th December, 2009

147. **Long Range Forces and Neutrino Oscillations**

Invited talk given at the IDS-NF meeting, TIFR, Mumbai, India, 12th October, 2009

148. **Physics Potential of Long Baseline Neutrino Oscillation Experiments**  
Seminar given at TIFR, Mumbai, India, 8th October, 2009
149. **Physics Potential of Long Baseline Neutrino Oscillation Experiments**  
Seminar given at SINP, Kolkata, India, 17th September, 2009
150. **Constraining sterile neutrinos with a low energy Beta-beam**  
Invited talk given at the NUFACT 2009 Conference, Illinois Institute of Technology, Chicago, USA, 24th July, 2009
151. **Beta-beam: An Ultimate Probe for Sterile Neutrinos**  
Invited talk given at the PHENO 2009 Conference, University of Wisconsin, Madison, USA, 12th May, 2009
152. **Physics Potential of Long Baseline Neutrino Oscillation Experiments**  
Virginia Tech, Blacksburg, Virginia, USA, 20th April, 2009
153. **CERN-INO magical Beta-beam experiment :  
A high precision probe for neutrino parameters**  
Seminar given at Virginia Tech, Blacksburg, Virginia, USA, 8th December, 2008
154. **Probing Neutrino Parameters with a Two-Baseline Beta-Beam Set-up**  
Talk given at the NUFACT 2008 Conference, Valencia, Spain, 30th June, 2008
155. **Unraveling Neutrino Parameters with a Magical Beta-Beam at INO**  
Talk given at the NUFACT 2008 Conference, Valencia, Spain, 30th June, 2008
156. **Neutrino Parameters with Magical Beta-Beam at INO**  
Neutrino 2008, 25th-31st May 2008, Christchurch, New Zealand
157. **Exceptional Sensitivity to Neutrino Parameters with a Two-Baseline  
Beta-Beam Set-up**  
The conference dedicated to “Neutrinos and Beams” at Darjeeling, India, 6th May, 2008
158. **Physics Potential of Long Baseline Experiments**  
Harish-Chandra Research Institute, Allahabad, India, 24th April, 2008

159. **Prospects of INO with Neutrino Beams**  
Diamond Jubilee Seminar on Current Trends in Physics, Punjab University, Chandigarh, India, 29th February, 2008
160. **Long range forces in long baseline experiments**  
NuHoRIZons 2008 conference, Harish-Chandra Research Institute, Allahabad, India, 14th February, 08.
161. **Physics Potential of Long Baseline Experiments**  
WHEPP-X, IMSc, Chennai, India, 5th January, 2008
162. **Some aspects of neutrino mixing and oscillations**  
Calcutta University, Kolkata, India, 10th September, 2007
163. **New Physics Searches with Beta Beams**  
NuFact 07 Conference, Okayama University, Japan, 8th August, 2007
164. **Magic Baseline Beta Beam**  
INFN, Padova, Italy, 28th June, 2007
165. **Magic Baseline Beta Beam**  
ICTP, Trieste, Italy, 26th June, 2007
166. **Magic Baseline Beta Beam**  
Max-Planck-Institute for Physics, Munich, Germany, 29th May, 2007
167. **The India-based Neutrino Observatory : Present Status and Physics Prospects**  
University of Wurzburg, Germany, 24th May, 2007
168. **Magic Baseline Beta Beam**  
MPI-K, Heidelberg, Germany, 21st May, 2007
169. **Neutrino mass hierarchy and  $\theta_{13}$  with a magic baseline Beta Beam experiment**  
International Workshop on Theoretical High Energy Physics (IWTHEP), IIT, Roorkee, India, 19th March 2007

170. **Neutrino Oscillation and India Based Neutrino Observatory**  
Centre for Theoretical Physics, Jamia Millia Islamia, New Delhi, India, 13th March, 2007
171. **Prospects of INO with Beams**  
INO Collaboration meeting, University of Delhi, Delhi, India, 9th March, 2007
172. **Neutrino mixings and leptonic CP violation from CKM matrix and Majorana phases**  
Joint Indo - German School and Workshop 2007 (JIGSAW '07), TIFR, Mumbai, India, 19th February, 2007
173. **New physics search at INO**  
Joint Indo - German School and Workshop 2007 (JIGSAW '07), TIFR, Mumbai, India, 19th February, 2007
174. **Neutrino mixings and leptonic CP violation from CKM matrix and Majorana phases**  
21st International Workshop on Weak Interactions and Neutrinos (WIN07), SINP, Kolkata, India, 17th Jan 2007
175. **Neutrino mass hierarchy and  $\theta_{13}$  with a magic baseline Beta Beam experiment**  
21st International Workshop on Weak Interactions and Neutrinos (WIN07), SINP, Kolkata, India, 17th Jan 2007
176. **Neutrino mass hierarchy and  $\theta_{13}$  with a magic baseline Beta Beam experiment"**  
Theoretical Physics Seminar Circuit talk given at Physical Research Laboratory, Ahmedabad, India, 11th Jan 2007
177. **Neutrino mass hierarchy and  $\theta_{13}$  with a magic baseline Beta Beam experiment**  
17th DAE-BRNS Symposium on High Energy Physics, IIT Kharagpur, India, 11th December, 2006
178. **Physics reach of CERN-INO baseline with beta beams**  
Neutrino 2006, Santa Fe, USA, 16th June, 2006
179. **Physics reach of CERN – INO baseline with Beta Beam**  
WHEPP-9, Institute of Physics, Bhubaneswar, January, 2006

180. **Scoping study: Beta Beam and INO**

INO simulation meeting, HRI, Allahabad, India, October 24-26, 2005

181. **The novel aspects of a long baseline Beta Beam experiment with INO**

Invited talk at Satellite neutrino meeting, Mumbai, August 1-2, 2005

182. **Precision measurement of  $\theta_{13}$  using beta beam**

XVI DAE-BRNS Symposium on High Energy Physics, Saha Institute of Nuclear Physics, Kolkata, India, Nov-Dec 2004

## **Academic Visits & Conferences/Schools/Workshops/Meetings Attended**

1. XXVI DAE-BRNS HEP Symposium 2024, Banaras Hindu University, Varanasi, Uttar Pradesh, India, 19th to 23rd December 2024
2. BCVSPIN Conference 2024: Particle Physics and Cosmology in the Himalayas, Tribhuvan and Kathmandu University, Kathmandu, Nepal, 9th to 13th December 2024
3. “Vitalizing Indian Earth Science” meeting, Indian Academy of Sciences, Bengaluru, Karnataka, India, 26th to 27th October 2024
4. 1st DAE Conclave 2024, NISER, Bhubaneswar, Odisha, India, 22nd to 26th October 2024
5. XVII International Conference on Interconnections between Particle Physics and Cosmology (PPC 2024), Indian Institute of Technology Hyderabad, Hyderabad, Telangana, India, 14th to 18th October 2024
6. Workshop on Dark Matter and Astroparticle Physics (WDMAP), Institute of Physics, Bhubaneswar, Odisha, India, 7th to 9th August 2024
7. 29th International Symposium on Particles, Strings, and Cosmology (PASCOS 2024), ICISE, Quy Nhon, Vietnam, 7th to 13th July 2024
8. Neutrino school on “Understanding the Universe through Neutrinos”, ICTS-TIFR, Bengaluru, Karnataka, India, 29th April to 1st May 2024

9. Workshop on “Radio detection of ultra-high energy neutrino and cosmic rays”, Aligarh Muslim University, Aligarh, Uttar Pradesh, India, 18th to 20th April 2024
10. Physics and Astronomy Department, Northwestern University, Evanston, Illinois, USA, 12th January 2024
11. GW-EM-Nu-2023 Conference at TIFR, Mumbai, Maharashtra, India, 20th to 24th November 2023
12. Physics Department, University of Hawaii at Manoa, Honolulu, Hawaii, USA, 8th to 10th November 2023
13. Fall 2023 IceCube Collaboration Meeting, Grand Rapids, MI, USA, 18th to 23rd October 2023
14. Neutrino Workshop at IFIRSE, ICISE, Quy Nhon, Vietnam, 16th to 19th July 2023
15. 2nd International Workshop on “Multi-messenger Tomography of Earth (MMTE 2023)”, APC-Université Paris Cité, Paris, France, 4th to 7th July, 2023
16. Fall 2022 IceCube Collaboration Meeting, Madison, Wisconsin, USA, 18th to 23rd September, 2022
17. NuFact 2022 Conference, The Cliff Lodge at Snowbird, Salt Lake City, Utah, USA, 31st July to 6th August, 2022
18. 1st International Workshop on “Multi-messenger Tomography of Earth (MMTE 2022)”, The Cliff Lodge at Snowbird, Salt Lake City, Utah, USA, 30th to 31st July, 2022
19. Ninth Meeting on CPT and Lorentz Symmetry, Indiana University, Bloomington, Indiana, USA, 17th to 26th May 2022
20. Workshop on Tau Neutrinos from GeV to EeV 2021 (NuTau2021), BNL, Upton, USA, 28th September to 2nd October, 2021
21. International Online Workshop on Outlook for INO, IICHEP, and Beyond, TIFR, Mumbai, India, 19th to 20th February, 2021
22. DAE-BRNS High Energy Physics (HEP) Online Symposium, NISER, Bhubaneswar, India, 14th to 18th December 2020

23. India-based Neutrino Observatory (INO) Online Collaboration meeting, TIFR, Mumbai, India, 26th to 27th September 2020
24. Virtual Mini-Workshop on Neutrino Theory at Fermilab, Chicago, USA, 21st to 23rd September, 2020
25. PROSPECT-focused Oscillation Online Workshop, Illinois Institute of Technology, Chicago, USA, 18th to 19th August, 2020
26. Neutrino 2020 Online Conference, Fermilab, Chicago, USA, 22nd June to 2nd July, 2020
27. International Conference on Synergy of Sciences (ICSS - 2020), SASTRA Deemed University, Thanjavur, Tamil Nadu, India, 27th to 29th February, 2020
28. India-based Neutrino Observatory (INO) Collaboration meeting, TIFR, Mumbai, India, 16th to 17th November, 2019
29. Prospects of Neutrino Physics Workshop, Kavli IPMU, Kashiwa, Japan, 8th to 12th April, 2019
30. National Seminar on Recent Advances in Physics (NSRAP-2019), P.G. Department of Physics, Berhampur University, Berhampur, Odisha, India, 23rd to 24th March, 2019
31. SERB School on Experimental High Energy Physics, TIFR, Mumbai, India, 24th to 26th January, 2019
32. Vision Scheme - 7 (VS7) Sub-committee Meeting to review the Mega Science Projects of DAE, IPR, Gandhinagar, India, 3rd January, 2019
33. IITB - ICTP Workshop on Neutrino Physics, IIT Bombay, Mumbai, India, 14th to 18th December, 2018
34. Academic visit to ICTP, Trieste, Italy, 5th to 19th September, 2018
35. Neutrino Oscillation Workshop (NOW) 2018, Ostuni, Italy, 9th to 16th September, 2018

36. Lecture Workshop on High Energy Physics at the Department of Physics, Maharajah's College (Autonomous), Vizianagaram, Andhra Pradesh, India, 9th to 10th August, 2018
37. Advanced workshop on Physics of Atmospheric Neutrinos - PANE 2018, ICTP, Trieste, Italy, 28th May to 1st June, 2018
38. Academic visit to ICTP, Trieste, Italy, 8th May to 18th June 2018 including a visit to INFN, Rome (14th - 15th May) and INFN, Padova (25th - 26th May), Italy
39. Dark Matter experiment at Jaduguda Underground Science Laboratory (JUSL) - First National Level Collaboration Meeting, SINP, Kolkata, India, 12th April 2018
40. Nu HoRizons VII Conference, HRI, Allahabad, India, 21st to 23rd February, 2018
41. Workshop on High Energy Physics Phenomenology (WHEPP XV), IISER Bhopal, Bhopal, India, 15th to 21st December, 2017
42. NuFact 2017 Conference, Uppsala University, Uppsala, Sweden, 25th-30th September, 2017
43. Workshop on Recent Developments in Neutrino Physics and Astrophysics, LNGS and GSSI, Assergi and L'Aquila, Italy, 4th to 7th September, 2017
44. Indo-Japan Neutrino Meeting at Institute of Physics, Bhubaneswar, 15th May, 2017
45. Academic visit to ICTP, Trieste, Italy, from 13th November to 16th December 2016 including a visit to INFN, Milan, Italy from 28th-30th November, 2016
46. 82nd Annual Meeting of Indian Academy of Sciences, IISER Bhopal, Bhopal, India, 4th-6th November 2016
47. Workshop on New Frontiers in Electroweak Interactions of Leptons and Hadrons, Aligarh Muslim University, Aligarh, India, 2nd-3rd November, 2016
48. India-based Neutrino Observatory (INO) collaboration meeting, Homi Bhabha Centre for Science Education (HBCSE), Mumbai, India, 24th-25th October, 2016
49. NuFact 2016 Conference, Quy Nhon, Vietnam, 21st-27th August, 2016

50. First Workshop on Beyond Standard Model Phenomenology at IISER Mohali (PHENO1@IISERM), IISER Mohali, Mohali, India, 6th-9th April, 2016
51. Frontiers in High Energy Physics (FHEP) III meeting, IMSc, Chennai, India, 22nd-25th March, 2016
52. Nu HoRIZons VI Conference, HRI, Allahabad, India, 17th-19th March, 2016
53. Crossroads of Neutrino Physics Workshop, Mainz Institute for Theoretical Physics, Johannes Gutenberg University, Mainz, Germany, 20th July-14th August, 2015
54. India-based Neutrino Observatory (INO) Collaboration meeting, IIT Madras, Chennai, India, 2nd-4th April 2015
55. India-based Neutrino Observatory (INO) Collaboration meeting, IICHEP, Madurai, Tamil Nadu, India, 18th-20th September 2014
56. DAE-DST Vision meeting on Nuclear, Particle, and High Energy Physics, BARC/HBCSE, Mumbai, India, 24th-25th August 2014
57. 37th International Conference on High Energy Physics (ICHEP 2014), Valencia, Spain, 2nd-9th July 2014
58. International meeting for Large Neutrino Infrastructures, Paris, France, 23rd-24th June, 2014
59. India-based Neutrino Observatory (INO) collaboration meeting, VECC, Kolkata, India, 3rd-5th April 2014
60. Workshop on High Energy Physics Phenomenology (WHEPP-2013), Puri, Orissa, India, 12th to 21st December, 2013
61. International Workshop on Next Generation Nucleon Decay and Neutrino Detectors (NNN13), Kavli IPMU, Kashiwa, Japan, 11th-13th November, 2013
62. India-based Neutrino Observatory (INO) collaboration meeting, Madurai Kamaraj University, Madurai, Tamil Nadu, India, 13th-15th September, 2013

63. International Conference on 'Triggering Discoveries in High Energy Physics', University of Jammu, India, 9th-12th September, 2013
64. NUFACT 2013 workshop, Institute of High Energy Physics (IHEP), Beijing, China, 19th-24th August, 2013
65. Particle Physics at the Crossroads: Edinburgh - India Symposium, India International Centre, New Delhi, India, 15th-17th February 2013
66. XX DAE-BRNS HEP symposium, Visva-Bharati, Santiniketan, India, 13th-18th January 2013
67. Neutrino Oscillation Workshop (NOW 2012), Otranto, Lecce, Italy, 9th-16th September 2012
68. 4th EUROnu annual meeting, APC, Paris, France, 12th-15th June, 2012
69. XIIth Workshop on High Energy Physics Phenomenology (WHEPP-XII), Fountain Hotel, Mahabaleshwar, India, 8th to 15th January, 2012
70. 12th International Workshop on Next Generation Nucleon Decay and Neutrino Detectors (NNN11), Zurich, Switzerland, 7th-9th November 2011
71. NuFact'11 Conference, CERN and University of Geneva, Switzerland, 1st-6th August, 2011
72. FLASY 2011 workshop, IFIC, Valencia, Spain, 11th-14th July, 2011
73. 2nd International Workshop towards the Giant Liquid Argon Charge Imaging Experiment (GLA2011), Jyväskylä, Finland, 5th-10th June, 2011
74. Rencontres de Moriond - Electroweak session, La Thuile, Aosta valley, Italy, 13th-20th March, 2011
75. Nu HoRIZons IV conference, HRI, Allahabad, India, 23rd-25th February, 2011
76. Third EUROnu annual meeting, 18th-21st January 2011 at the STFC Rutherford Appleton Laboratory
77. Brookhaven Forum 2010 - A Space-Time Odyssey, Upton, NY, USA, May 26-28, 2010

78. PHENO 2010 Conference, University of Wisconsin, Madison, USA, May 10-12, 2010
79. IDS-NF meeting, TIFR, Mumbai, India, October, 2009
80. NuFact'09 Conference, Illinois Institute of Technology, Chicago, USA, July, 2009
81. PHENO 2009 Conference, University of Wisconsin, Madison, USA, May, 2009
82. NuFact'08 Conference, Valencia, Spain, June-July, 2008
83. Conference dedicated to "Neutrinos and Beams" at Darjeeling, India, May 2008
84. Diamond Jubilee Seminar on Current Trends in Physics, Panjab University, Chandigarh, India, February, 2008
85. Nu Horizons, HRI, Allahabad, India, February, 2008
86. Xth Workshop on High Energy Physics Phenomenology (WHEPP-X), IMSc, Chennai, India, 2nd to 13th January, 2008
87. Ninth International Workshop on Neutrino Factories, Super Beams and Beta Beams (NuFact07), Okayama University, Okayama, Japan, August 6-11, 2007
88. 6th International School on Neutrino Factories, Super Beams and Beta Beams, KEK, Tsukuba, Japan, July 27 - August 4, 2007
89. Summer School on Particle Physics, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, 11th to 22nd June, 2007
90. International Workshop on Theoretical High Energy Physics (IWTHEP), Indian Institute of Technology, Roorkee, India, March 2007
91. INO Collaboration meeting, University of Delhi, Delhi, India, 9th March, 2007
92. Joint Indo-German School and Workshop 2007 (JIGSAW '07), Tata Institute of Fundamental Research, Mumbai, India, February 2007
93. XXI International Workshop on Weak Interactions and Neutrinos (WIN07), Saha Institute of Nuclear Physics, Kolkata, India, Jan 2007

94. Topical Meeting on Physics at the LHC, Harish-Chandra Research Institute (HRI), Allahabad, India. 16-21 December 2006
95. XVII DAE-BRNS High Energy Physics Symposium, Indian Institute of Technology, Kharagpur, India, December, 2006
96. 2nd phase of INO School, Variable Energy Cyclotron Centre/Saha Institute of Nuclear Physics, Kolkata, India, May 1-13, 2006
97. 1st phase of INO School, Harish-Chandra Research Institute, Allahabad, India, April, 2006
98. XXI SERC Main School in Theoretical High Energy Physics, Physical Research Laboratory, Ahmedabad, 11th February to 5th March, 2006
99. IX Workshop on High Energy Physics Phenomenology (WHEPP-9), Institute of Physics, Bhubaneswar, January 3-14, 2006
100. Satellite neutrino meeting Mumbai, August 1-2, 2005, preceding the International Cosmic Ray Conference, ICRC2005, Pune, Aug 2005
101. XX SERC Main School in Theoretical High Energy Physics, Indian Institute of Technology, Kanpur, India, December 4 - 24, 2004
102. XVI DAE-BRNS High Energy Physics Symposium, Saha Institute of Nuclear Physics, Kolkata, India, Nov-Dec 2004
103. Preparatory SERC School in Theoretical High Energy Physics, University of Hyderabad, Hyderabad, India, 18th November to 7th December, 2003

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