

60. Dr. Colin Benjamin Seminar on “Research in theoretical nanoscience, quantum information and game theory” at SPS, NISER, for SPS DAY, January 2021.
61. Dr. Anamitra Mukherjee- Interplay of frustration and interaction at finite temperatures in the Hubbard model: 3rd Annual Conference on Quantum Condensed Matter (QMAT 2020).
62. Dr. Anamitra Mukherjee- Metal Insulator transitions in the ANiO₃ Nickelates: Condensed Matter Physics Webinar Group (Organised by: IIT Kanpur, IIT Delhi, IIT Goa, SNU Delhi, and NISER)
63. Dr. Victor Roy- Invited mini review talk in DAE HEP 2020
64. Dr. Kartik Snapari- Invited talk at Quantum matters and Heterostructures 2020
65. Dr. Sumedha- Tutored for quantum mechanics at the Vigyan Vidushi 2020 organised by TIFR Mumbai and HSCSE (June 2020)
66. Dr. Satyaprasad P. Senanayak-Invited talk on: Charge transport Physics of Perovskite transistors at PMHP-2020, IIT Roorkee
67. Dr. Satyaprasad P. Senanayak-Invited Talk in International Conference on ‘Advanced Polymeric Materials-2021’

Poster presentations: Nil Recognitions

1. Prof. Bedangadas Mohanty was elected as Fellow of American Physical Society in the year 2020.
2. Prof. Bedangadas Mohanty was elected as the spokesperson of ALICE-STAR-INDIA collaboration for the period January 2021 to December 2022.
3. Prof. Bedangadas Mohanty endorsed as Conference Committee Member of ALICE Experiment.
4. Dr. Ritwick Das- The Optical Society (OSA), USA senior membership.
5. Dr. Sumedha- Simons associate, ICTP, Trieste, Italy (2020-2025).
6. Dr. Satyaprasad P. Senanayak-Royal Society Alumni Award, UK (2020-2021).
7. Dr. Satyaprasad P. Senanayak-Associate of Indian Academy of Sciences, Bangalore.

8. Dr. Colin Benjamin-Resource person for ATAL FDP program of AICTE under MHRD, Govt. of India.

Doctoral degree awarded to Ph.D. Students:

1. Sourav Kundu, Thesis title: “Angular and momentum distribution of vector mesons produced in proton-proton and heavy-ion collisions at LHC energies” under Prof. Bedangadas Mohanty
2. Prof. Bedangadas Mohanty Co-supervised: Ashutosh Dash, Thesis title: “Influence of hadronic interactions and magnetic field on the bulk properties of matter produced in heavy-ion collision
3. Sagarika Nayak under Dr. Subhankar Bedanta.
4. Deepali Mishra under Dr. Yogesh Srivastava.
5. Ashutosh Das under Dr. Victor Roy

Outreach Program:

1. Dr. Yogesh Srivastava Presented webinar on “Relativity and Black Holes” at Amity University on 3rd May 2020.
2. Dr. Yogesh Srivastava Presented webinar on Physics Nobel Prize 2020 at NISER on 3rd December 2020.
3. Dr. Yogesh Srivastava Presented a seminar on quantum black holes on SPS Day 2021 (23rd Jan).

Major research facilities added in School of Physical Sciences:

1. Dr. Ritwick Das- Supercontinuum source
2. Dr. Nishikanta Khandai- Saha Cluster: 16 nodes (640 cores) added to upgrade HPC facility.
3. Dr. Subhankar Bedanta- Cluster thin film deposition system comprising of dc/rf sputtering, effusion cells, and LEED attachment for in-situ characterization.
4. Dr. Satyaprasad P. Senanayak Semiconductor Parameter Analysis System
5. Dr. Satyaprasad P. Senanayak High frequency electrical characterization System

Other Additional Duties/Information

1. Dr. Nishikanta Khandai-Faculty in Charge, Computer Center
2. Dr. Nishikanta Khandai-Member, Institute Affairs Committee
3. Dr. Nishikanta Khandai-Chairman, Computer Advisory Committee

OUTREACH ACTIVITIES

NISER is mindful of its social responsibilities and has been reaching out to students and teachers to motivate them in their scientific pursuit. Spearheaded by Dr. Debasmita P. Alone, the activities are coordinated and spread round the year in three categories: NISER Open Day, Teacher Training Workshops and Educational Visits of schools.

Secondly, NISER along with Institute of Physics is executing the Vigyan Pratibha Project of the Department of Atomic Energy to train teachers by conducting various teacher-training workshops in Odisha and Chhattisgarh region. Vigyan Pratibha is a novel initiative of Government of India under the aegis of Department of Atomic Energy for extended nurture of talent in Science and Mathematics among school students of Class 8th to 10th in Kendriya Vidyalaya, Jawahar Navodaya Vidyalaya, and Atomic Energy Central schools across the country. The core of the project will be in the form of learning units that are an extension to the topics taught in classrooms which can deliver practical knowledge and instill the basic concepts through “Learning by Doing” in the students. The key aspect of this program is that science circles in schools, in which students will conduct Learning Units developed as a part of the program at Homi Bhabha Centre for Science Education (HBCSE) with the help of faculties all over the country. It also has an exposure dimension as a part of which the students and teachers will get to see high-end scientific research facilities by visits to national scientific institutions. This year have conducted two workshops for training teachers of various learning units for the teachers

who in turn have been able to conduct the learning units in their respective schools involving students and the reviews have been very satisfactory.

There are year-round visits of students and faculty from various institutions who get a first-hand experience of an elite Scientific Institution. The Scientific Officers at various schools have been carrying out the responsibility of these activities. Students and teachers from all around the country, nearby, far and remote areas, have been encouraged to participate in these visits. They are escorted through various research facilities of all the departments for a better understanding of the academic learning at an educational institution such as NISER. These kind of educational trips provide the students to learn through a genuine experience to gather knowledge and perspective into the possible career paths in the scientific community. They help in breaking the stereotypes related to academics and provides insight as to why Science and Mathematics is highly important for the society, and also why it can be interesting as well. When school students observe the work-life of people at NISER and interact with them, it leads to better achievement, standards, motivation, personal development and behavior in them. These visits also help to enhance the social, personal and emotional development of all participants. They are left with a sense of imagination and new found interest for science.

Due to COVID-19 pandemic situation, no Outreach activity was undertaken during 2020-21.