PLACEMENT BROCHURE 2021

राष्ट्रीय विज्ञान शिक्षा एवं अनुसंधान संस्थान
NISER
विद्ययाऽमृतमश्नुते

NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
BHUBANESWAR

CONTENTS


“Nothing in life is to be feared,
it is only to be understood.
Now is the time to understand more,
so that we may fear less.”
~ Marie Curie

MESSAGE FROM DIRECTOR

The National Institute of Science Education and Research, (NISER) Bhubaneswar is a pre-eminent Institution of science education and research under the Department of Atomic Energy of India. NISER has the mandate to impart undergraduate science education on a research driven foundation, building resources for our nation's future of burgeoning research and development requirements. The Institute has an Integrated M. Sc. programme to which students are admitted through a rigorous national level screening test. The students of the programme get a preliminary grounding training in all major scientific disciplines for one year, following which they choose a major discipline for their programme. The students also get exposure to basic humanities subjects as a part of their programme. The academic training involves faculty of exceptional track records, research oriented pedagogy, exposure to advanced scientific laboratories and techniques, and significant amount of research projects. We also have very dynamic Ph.D programmes in various disciplines, and an Integrated M.Sc–Ph.D programme. The institute boasts laboratories with cutting edge technologies in all major scientific disciplines. All our academic programmes are under the auspices of and degrees are awarded by the Homi Bhabha National Institute (HBNI), one of the topmost education institutions of the country; ranked 14 according to the National Institutional Ranking Framework-2020. Besides, NISER has been recognized by Clarivate Analytics as the most influential research Institution for its outstanding and pioneering research contribution to the country under the category of Institutions established within 15 years.

In the last one and half decades of its existence, NISER has received national and international acclaim for the research achievements of our faculty and academic excellence of our students. The accomplishments of our young alumni underpins the relentless pursuit of excellence by the institute. The maturity, scientific temper and academic rigour that our students achieve by the time of graduation render them ideally suited for handling tomorrow's research and development challenges of respective scientific disciplines. Through this message I cordially welcome all organisations and recruiters to our institute.

Prof. Sudhakar Panda
DIRECTOR, NISER.

ABOUT NISER

National Institute of Science Education and Research (NISER), Bhubaneswar, established in 2007, `is envisioned to be a unique institution of its kind in India under the aegis of the Department of Atomic Energy (DAE). It has been established with the aim of embedding scientific rigor within larger pedagogic practices in our country. The Institute is affiliated with Homi Bhabha National Institute (HBNI), Mumbai, a deemed research university that oversees academic programs at Institutions that are part of the DAE structure.

NISER cultivates some of the best young scientific minds in the country. Our students' current science education and cutting-edge research experience allows them to think about qualitative differences in their learning outcomes rather than merely attending classes.

NISER offers world-class facilities such as fully equipped library, state-of-the-art laboratories, and computational facilities, and excellent infrastructure to its students, along with training from supremely qualified faculty members with splendid research-based achievements.

Students participate in institute talks, seminars, and colloquia held regularly, encouraging students to think and question current narratives. NISER promotes both theoretical and experimental research in frontier areas in all branches of science, putting equal emphasis on both research and teaching.

"If everyone is moving forward together, then success takes care of itself."

~ Henry Ford

Selection into NISER

Students seeking admission in NISER in 5-year Integrated M.Sc. program will have to appear for National Entrance Screening Test (NEST) conducted every year at 90 centers in India, where approximately 80,000 students take the test to fill 200 seats in NISER. (0.25% acceptance rate)

All undergraduate students of NISER are recipients of either the INSPIRE, DISHA, or KVPY fellowship with a minimum monthly stipend of Rs 5000 and a contingency of Rs 20,000.

NISER also takes Ph.Ds and Int. MSc-Ph.D from exams like NET, JEST etc.

Programs offered and Scholarships

NISER offers three degrees, Integrated MSc, Integrated MSc-Ph.D, and Ph.D. degree.

NISER offers a 5-year integrated M.Sc. Program in Biological Sciences, Chemical Sciences, Mathematical Sciences, and Physical Sciences. The curriculum for the first two semesters (first year) is common to all students, and specialization begins from the second year. After specialization in the second year, students must go through a certain number of courses in other disciplines. Apart from these, students are required to go through some compulsory courses in humanities, social sciences, technical communication, history of science, environmental and energy sciences. In the fifth year, every student undertakes a guided research project, the outcome of which is reported in the form of a thesis. Students are encouraged to take up summer projects throughout the five-year program and visit reputed national, international laboratories and universities.

School of Biological sciences

The School of Biological Sciences (SBS) has been involved in mixing and imparting traditional wisdom with modern technology by developing research programs and a vibrant teaching curriculum. SBS promotes scholarly and innovative thinking to conduct cutting-edge research in diverse areas ranging from molecular to organismic biology.

Classroom courses:

- Microbiology
- Biochemistry
- Biophysics and Biostatistics
- Cell Biology
- Genetics
- Physiology (Plant)
- Animal Physiology
- Ecology
- Molecular Biology
- Immunology
- Evolutionary Biology
- Bioinformatics
- Developmental Biology
- Bio-techniques

Lab courses:

- Microbiology
- Biochemistry
- Cell Biology
- Genetics
- Physiology (Plant)
- Molecular Biology
- Immunology

Matchless MENTORS

"All outstanding work, in art as well as in science, results from immense zeal applied to a great idea"
~ Santiago Ramón y Cajal

B Ravindran, Emeritus Professor
JIPMER Pondicherry and Delhi University
Liverpool School of Tropical Medicine, UK
University of Connecticut Health Centre, USA

Asima Bhattacharyya, Associate Professor
Ph.D. (Jadavpur University, Kolkata),
Postdoc (University of Virginia, USA)

Chandan Goswami, Associate Professor
Ph.D. (Freie University of Berlin, Germany),
Postdoc (Max Planck Institute for Molecular Genetics, Germany).

Debasmita Pankaj Alone, Associate Professor
Ph.D. (Banaras Hindu University, Varanasi),
Postdoc (National Institutes of Health, Bethesda, USA).

Harapriya Mohapatra, Associate Professor
Ph.D. (University of Delhi South Campus, New Delhi),
Postdoc (Institute of Life Sciences, Bhubaneswar).

Manjusha Dixit, Associate Professor
Ph. D. (Department of Medical Genetics, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow),
Postdoc (Center for Genetic Medicine Research, Childrens National Medical Center, USA) & (John A. Moran Eye Center, University of Utah, USA).

Palok Aich, Associate Professor
Ph.D (Saha Institute of Nuclear Physics),
Post Doc(Stockholm University (SU) and Karolinska Institutet, Sweden),
Post Doc (University of Saskatchewan ,Saskatoon, SK, Canada)

Praful Singru, Associate Professor
Ph.D (Nagpur University, India)

Subhasis Chattopadhyay , Associate Professor
Ph.D (Department of Immunology, Indian Institute of Chemical Biology, Jadavpur University)
Post Doctoral Fellow, (Department of Medicine, University of Connecticut Health Center, USA)
Post Doctoral Fellow, (Department of Immunology, University of Connecticut Health Center, USA)

Kishore CS Panigrahi, Reader F
Ph.D (TIFR, Mumbai, India)
Post Doc (UNIL, Switzerland; ALU, Freiburg, Germany)

Mohammed Saleem, Reader F
Ph.D - Institute of Biochemistry, Graduate School of Chemistry,
University of Münster, Germany.
Postdoc - Institute Curie, Paris & Department of Biochemistry,
University of Geneva, Switzerland.

Pankaj Vidyadhar Alone, Reader F
Ph.D. In Molecular Biology (National Institute of Immunology,
J.N.U. Campus ,New Delhi)

Ramanujam Srinivasan, Reader F
Ph.D (Indian Institute of Science, Bangalore, India)

Renjith Mathew, Reader F
Ph.D, (Indian Institute of Science, Bangalore, India)
Postdoc-Penn State Hershey Medical Center
Postdoc-European Molecular Biology Laboratory, Germany

Rudresh Acharya, Reader F
Ph.D. Bio-Crystallography, (IISc Bangalore,Department of Physics)
Postdoctoral. (University of Pennsylavnia Medical School)

Tirumala Kumar Chowdary, Reader F
Ph.D (Centre for Cellular and Molecular Biology, Hyderabad)

V Badireenath Konkimalla, Reader F
Ph.D:(University of Heidelberg, Germany)
Post-doctoral fellow:(German Cancer Research Center (DKFZ),
Heidelberg, Germany)

Aniruddha Datta Roy, Assistant Professor
Ph.D, (Indian Institute of Science, Bangalore, India)
Post-doctoral fellow (Indian Institute of Science, Bangalore, India)

School of Chemical Sciences

The School of Chemical Sciences at NISER aims to impart a high-quality undergraduate and postgraduate level of knowledge to students coupled with cutting-edge research activity by the faculty and the School's students. In addition to traditional organic, inorganic, physical, and theoretical chemistry areas, the School has embarked on teaching and research activity in the interface areas of Biology, Material Sciences, and Medicine.

Classroom courses:

- Basic Inorganic Chemistry
- Reaction Mechanisms in Organic Chemistry
- Mathematical Methods for Chemists
- Reagents in Organic Syntheses
- Main group and Organometallic Chemistry
- Quantum Chemistry
- Physical Organic Chemistry
- Molecular Spectroscopy and group Theory
- Thermodynamics and Electrochemistry
- Coordination Chemistry
- Chemical Binding
- Physical Methods in Chemistry
- Chemistry of Heterocycles and Natural Products
- Chemical Rate Processes

Lab courses:

- Inorganic chemistry lab
- Physical chemistry lab
- Biomolecular chemistry lab
- Organic chemistry lab
- Inorganic chemistry lab 2
- Physical chemistry lab 2
- Organic chemistry lab 2
- Masters project

Matchless MENTORS

" Science and everyday life cannot and should not be separated."
~ Rosalind Franklin

Himansu Sekhar Biswal, Associate Professor
Ph.D. (TIFR, Mumbai)
Post Doc. (Commissariat à l´Énergie Atomique (CEA), Saclay, France),
Post Doc. (University of Michigan (UoM), Michigan, USA)

T. K. Chandrashekar, Senior Professor
Ph.D. (Indian Institute of Science, Bangalore)

A.Srinivasan, Professor
Ph.D. (Indian Institute of Technology, Kanpur)

Vadapalli Chandrasekhar, Professor
Ph.D. (Indian Institute of Science, Bangalore),
Post Doc. (University of Massachusetts, Amherst)

Bhargava B.L. , Associate professor
Ph.D. (JNCASR),
Post-doc. (University of Pennsylvania)

Chidambaram Gunanathan, Associate professor
Ph.D. (CSIR, Bhavnagar, India),
Post Doc. (Weizmann Institute of Science, Israel)

Jogendra Nath Behera, Associate professor
Ph.D. (IISc Bangalore),
Post Doc. (UC Berkeley,USA),
Post Doc. (State University Of New York,Albany,USA)

Venkatasubbaiah Krishnan, Associate professor
Ph.D. (IIT, Kanpur),
Post Doc. (Rutgers University, Newark, USA),
Post Doc. (Georgia Institute of Technology, Atlanta, USA.)

Moloy Sarkar, Associate Professor
Ph.D. (The University of Hyderabad, India)

Nagendra Kumar sharma, Associate professor
Ph.D. NCL Pune,
Post Doc. (University of Utah, Salt Lake City, Utah (USA))

Bishnu Prasad Biswal, Assistant professor
Ph.D. degree from Academy of Scientific and Innovative Research (AcSIR),
CSIR-National Chemical Laboratory, Pune in April 2017

P. C. Ravikumar, Associate professor
Post Doc. (Yale University, USA.)
Post Doc. (Duquesne University, USA.)
Ph.D.,(Indian Institute of Science (IISc), Bangalore)

S. Peruncheralathan, Associate professor
Ph.D. (IIT, Kanpur)

Prasenjit Mal, Associate professor
Ph.D. (IIT, Kanpur), Marie Curie,
Postdoctoral Fellow,University of Cambridge, UK

Chandra Sekhar Purohit, Associate professor
Ph.D. (IIT, Kanpur), Post Doc. (LIMES, University of Bonn, Germany)

Sanjib Kar, Associate professor
Ph.D. (IIT, Bombay),
Post Doc. (Institute for Materials Chemistry and Engineering, Kyushu University, Japan)

Sudip Barman, Associate professor
Ph.D. (Indian Institute of Science, Bangalore)

Subhadip Ghosh, Associate Professor
Ph.D : Indian Association for the Cultivation of Science, India
Postdoctoral Fellow: RIKEN, Japan
Postdoctoral Fellow: University of Texas at Austin, USA

Sharanappa Nembenna, Associate professor
Ph.D in 2007 from Goettingen University, Germany
Postdoctoral Research Associate : Monash University, Melbourne (2008 - 2010)

Upakarasamy Lourderaj, Associate professor
Ph.D in 2004 from Indian Institute of Technology, Kanpur, India
Postdoctoral Research Associate at Texas Tech University (2004 - 2008)

Arindam Ghosh, Reader F
Ph.D in Physics, IISc Bangalore
Postdoctoral Associate, 2006 - 2010, Research group of Prof. Thomas Szyperski
Department of Chemistry, State University of New York, Buffalo, NY, USA

Bidraha Bagh, Reader- F
Ph.D. Univ. of Saskatchewan, Canada (Sept, 2007 - Sept, 2012)
Postdoc Univ. of Toronto, Canada (Oct, 2012 - Decm, 2014)

Dipak Samanta, Assistant professor
Ph.D, Indian Institute of Science, Bangalore
Post Doc. Weizmann Institute of Science in Israel
Post Doc. University of Twente and University of Groningenin, Netherlands.

School of Physical sciences

The School of Physical Sciences is in pursuit of excellence in research and teaching. It is engaged in very active research in the frontier areas. Physics of the macro world and micro world are vigorously explored. Students benefit from the excellent resources of a research institution dedicated to undergraduate teaching, developing powerful, broadly applicable problem-solving skills.

(The research topics for School of physical sciences includes Condensed Matter Physics,
Experimental High Energy Physics, String Theory, Ultra-cold atoms & Quantum optics, Non-Linear Optics, Quantum information, computation and simulation, Mesoscopic superconductivity, Nanofabrication and Photonics, and Statistical Mechanics and Interdisciplinary Applications.)

Classroom Courses:

- Mechanics & Thermodynamics
- Electricity, Magnetism & Optics
- Classical Mechanics I
- Classical Mechanics II
- Mathematical Methods I
- Mathematical Methods II
- Electromagnetism I
- Electromagnetism II
- Electronics
- Statistical Physics
- Quantum Mechanics I
- Quantum Mechanics II
- Special Theory of Relativity
- Atoms, Molecules & Radiation
- Introduction to Condensed Matter Physics
- Nuclei & Particle Physics

Lab Courses:

- Physics Laboratory I & II
- General Physics Lab
- Basic Electronics Lab
- Optics Lab
- Advanced Electronics Lab
- Solid State Physics Lab
- Modern Physics Lab I
- Modern Physics Lab II
- Computational Lab
- Open-ended lab I & II

Matchless MENTORS

"As I get older, I realize being wrong isn't a bad thing like they teach you in school. It is an opportunity to learn something."
~ Richard Feynman

Bedangadas Mohanty
Ph.D: Institute of Physics, Bhubaneswar
Postdoc: Lawrence Berkeley National Laboratory

Sanjay Kumar Swain
Ph.D: University of Hawaii, USA
Postdoc: Lawrence Berkeley National Laboratory

Ashok Mohapatra
Ph.D: Tata Institute of Fundamental Research, Mumbai

Colin Benjamin
Ph.D: Institute of Physics, Bhubaneswar,
Postdoc: Univ. of Georgia (Athens), Univ. of Leeds (UK), CNRS Marseille (France)

Prasanjit Samal
Ph.D: Indian Institute of Technology, Kanpur
Postdoc: University of Minnesota

Pratap Kumar Sahoo
Ph.D: Indian Institute of Technology, Kanpur
Postdoc: Laboratory for Micro and Nanotechnology PSi

Ritwick Das
Ph.D: Indian Institute of Technology, Delhi
Postdoc: Institute of Photonic Sciences, Barcelona (Spain)

Subhankar Bedanta
Ph.D: University of Duisburg-Essen, Duisburg, Germany
Postdoc: University of Duisburg-Essen (Germany), Princeton University (USA)

A. V. Anil Kumar
Ph.D: Indian Institute of Science, Bangalore
Postdoc: MIT, University of California (Riverside), University of Queensland (Brisbane), Johannes
Gutenberg Universitat Mainz

Ajaya Kumar Nayak
Ph.D: Indian Institute of Technology, Bombay
Postdoc: Johannes Gutenberg University of Mainz (Germany), Max Planck Institute(Germany)

Amaresh Kumar Jaiswal
Ph.D: Tata Institute of Fundamental Research, Mumbai.
Postdoc: GSI Helmholtz Centre for Heavy Ion Research, Darmstadt, Germany.

Anamitra Mukherjee
Ph.D: Harish Chandra Research Institute
Postdoc: Ohio State University, University of British Columbia, University of Tennessee

Chethan N. Gowdigere
Ph.D: University of Southern California, Los Angeles, USA
Postdoc: ICTP, Triestez

Shovon Pal
Ph.D: Max Planck Institute for Iron Research, Düsseldorf, Germany
Postdoc: ETH Zürich (Switzerland), National Enterprise for nanoScience (Italy), Ruhr-Universität
Bochum (Germany)

Joydeep Bhattacharjee
Ph.D: Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore
Postdoc:

Kartikeswar Senapati
Ph.D: Indian Institute of Technology Kanpur
Postdoc: University of Cambridge

Kush Saha
Ph.D: IACS, Kolkata
Postdoc: University of Sherbrooke (Canada), University of California (USA)

Nishikanta Khandai
Ph.D: Harish Chandra Research Institute
Postdoc: Brookhaven National Laboratory, Carnegie Mellon University

Najmul Haque
Ph.D: Saha Institute of Nuclear Physics (HBNI), Kolkata, India
Postdoc: Kent State University (USA), University of Giessen (Germany)

Prolay Kumar Mal
Ph.D: TIFR, Mumbai
Postdoc: Arizona University

Sumedha
Ph.D: TIFR, Mumbai
Postdoc: Universite Paris-Sud,Paris (France), Institute for Scientific Interchange (Italy), Brandeis
University (USA), HRI Allahabad

Sayantani Bhattacharya
Ph.D: TIFR, Mumbai
Postdoc: HRI Allahabad, IIT Kanpur

Subhasish Basak
Tuhin Ghosh
Ph.D: IUCAA, Pune
Postdoc: Institute d' Astrophysique Spatiale (France), Caltech U.S.A

V Ravi Chandra
Ph.D: Indian Institute of Science, India
Postdoc: Max-Planck-Institute for Physics (Germany), The Technion (Israel),

Victor Roy
Ph.D: Homi Bhabha National Institute
Postdoc: Goethe university Frankfurt, Lawrence Berkeley National Laboratory, USA and CCNU,
China

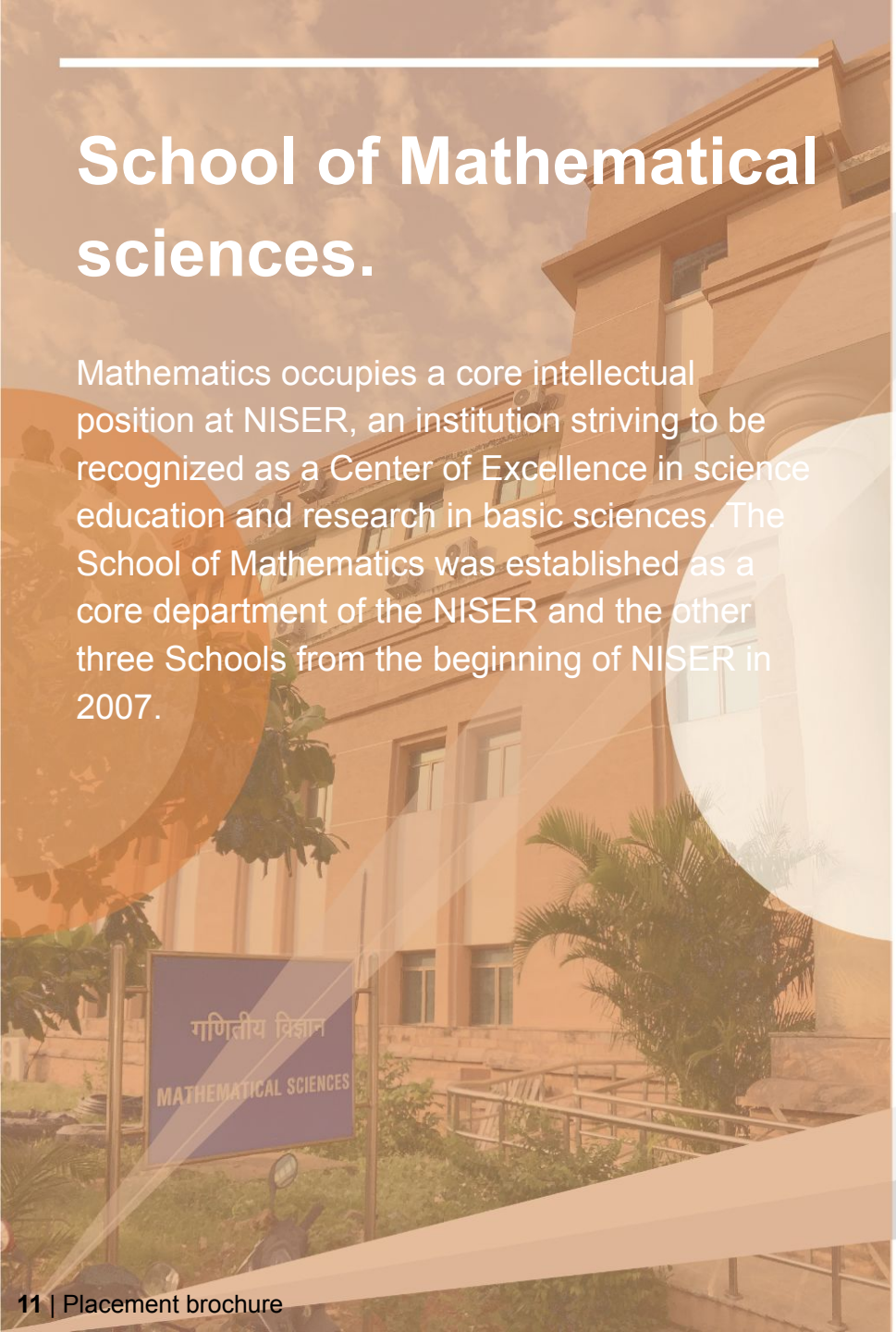
Yogesh Kumar Srivastava
Ph.D: The Ohio State University, USA.
Postdoc: HRI Allahabad, IPMU Japan

Ashis Kumar Nandy
Ph.D: Indian Association for the Cultivation of Science, Kolkata
Postdoc: Forschungszentrum Jülich GmbH (Germany), Uppsala University (Sweden)

Satyaprasad P Senanayak
Ph.D: JNCASR, Bangalore
Postdoc: Cavendish Laboratory, University of Cambridge, UK

School of Mathematical sciences.

Mathematics occupies a core intellectual position at NISER, an institution striving to be recognized as a Center of Excellence in science education and research in basic sciences. The School of Mathematics was established as a core department of the NISER and the other three Schools from the beginning of NISER in 2007.



Classroom Courses:

- Mathematics-I
- Mathematics II
- Real Analysis
- Group Theory
- Discrete Mathematics
- Metric Spaces
- Linear Algebra
- Probability Theory
- Number Theory
- Graph Theory
- Lebesgue Integration
- Rings and Modules
- Differential Equations
- Topology
- Statistics
- Calculus of Several Variables
- Field Theory
- Complex Analysis
- Geometry of curves and surfaces
- Numerical Analysis
- Functional Analysis
- Representations of Finite Groups
- Commutative Algebra
- Algebraic Topology
- There are no lab courses available because the subject includes theoretical and descriptive knowledge.

Matchless MENTORS

Ritabrata Munshi, Adjunct Professor
Ph.D Princeton University.

Varadharajan Muruganandam, Professor
Ph.D. Indian Institute of Technology, Kanpur.

Anil Karn, Associate Professor
Ph.D University of Delhi

Brundaban Sahu, Associate Professor
Ph.D Harish-Chandra Research Institute

Binod Kumar Sahoo , Associate Professor
Ph.D Indian Statistical Institute (Bangalore Center)

Sanjay Parui , Associate Professor
Ph.D Indian Statistical Institute (Bangalore Center)

Deepak Kumar Dalai, Reader F
Ph.D Computer Science(Cryptology) Indian Statistical Institute.

Kamal Lochan Patra, Reader F
Ph.D Indian Institute of Technology, Kanpur

Manas Ranjan Sahoo, Reader F
Ph.D TIFR CAM, Bangalore

Jaban Meher, Reader F
Ph.D Harish-Chandra Research Institute, Allahabad

Ritwik Mukherjee , Reader F
Ph.D Stony Brook University

Nabin Kumar Jana, Reader F
Ph.D Indian Statistical Institute, Kolkata

Sutanu Roy, Reader F
Dr. rer. nat. Georg-August-Universität Göttingen, Germany.

Panchugopal Bikram, Reader F
Ph.D Institute of Mathematical Sciences, Chennai

Dinesh Kumar Keshari, Reader F
Ph.D Indian Institute of Science (IISc), Bangalore

K. Senthil Kumar, Reader F
Ph.D., 2014, Harish-Chandra Research Institute, Allahabad

Krishanu Dan, Assistant Professor
Ph.D. (2015) Institute of Mathematical Sciences, Chennai, India.

Anupam Pal Choudhury, Assistant Professor
Ph.D. from Tata Institute of Fundamental Research- Centre for
Applicable Mathematics (Bangalore, India)

Kaushik Majumder , Assistant Professor
Ph.D Indian Statistical Institute, Kolkata

Chitrabhanu Chaudhuri, Assistant Professor
Ph.D Northwestern University, Evanston IL, USA

"There is geomentry in the humming of the strings, there is music in the spacing of the spheres"

~ Pythagoras

School of Computer Sciences

The School of Computer Sciences, NISER, provides the study of the theoretical foundations of information and computation. It includes practical techniques for their implementation and application in computer systems. Computer scientists invent algorithmic processes that create, describe, and transform information and formulate suitable abstractions to design and model complex systems.

Classroom Courses:

- Programming and Data Structures lab
- Theory of Computation
- Discrete Structures and Computation
- Design and Analysis of Algorithms.

Research and Development Scopes

- Machine Learning
- Cryptography
- Randomized Algorithms
- Information Theory
- Computational Geometry

Matchless MENTORS

Manindra Aggrawal, Adjunct Professor
Ph.D. in Computer Science, IIT Kanpur, 1991

Subhankar Mishra, Reader-F
NIT Rourkela
University of Florida
ORNL

Rishiraj Bhattacharya, Reader-F
Indian Stastical Institute

Aritra Banik, Reader-F
Ph.D in computer Sciences Indian Stastical Institute, Kolkata

Anup Kumar Bhattacharya, Assistant Professor
Ph.D IIT Delhi

Manoj Mishra, Assistant Professor
Ph.D IIT Bombay.

"It's very hard to fail completely if you aim high enough"

~ Larry Page

School of Humanities and Social Sciences

Humanities and Social Sciences, comprising the disciplines of Economics, English, Philosophy, Psychology, and Sociology, is an integral component of academic life at NISER. The courses from these disciplines form part of the required listings for undergraduate Science majors of the Integrated Five-year MSc program. The School enjoys a high degree of autonomy in designing core and elective courses for the student community that is primarily intended to encourage an understanding of the social substrate that anchors cultures of science. The courses are enhanced by the complementarity of research undertaken by the faculty. The School actively contributes to its knowledge ecosystem by working as a resource center for the neighborhood. The School's research engages with a diverse range of special challenges that are broadly covered under themes such as, Networks and Social Media, Institutions and the Psychology of Value, Disability and Care, Urban Psychogeography, Being and Biopolitics, Ecology and Human Systems, and Narrativizing built environments.

Classroom Courses:

- Introduction to Economics
- Introduction to Sociology
- Technical Communication I
- Technical Communication II
- Environmental Economics and Environmental Impact Assessment
- Introduction to Psychology
- Sociology of Science and Technology
- Perspectives on Indian Society
- Science Communication and the Citizen
- Life and Community in Urban World
- Introduction to Innovation System
- Speculative Fiction
- The City in Modern Fiction

Matchless MENTORS

Pranay Swain, Associate Professor
Ph.D, IIT Kanpur

Amarendra Das, Reader-F
Ph.D Centre For Development Studies, Thiruvananthpuram
JNU,New Delhi

Amarjeet Nayak, Reader-F
Ph.D, IIT Kanpur

Joe Varghese Yeldho, Reader-F
Ph.D IIT Kanpur

Debashish Pattanaik, Assistant Professor
Ph.D IIT Kanpur

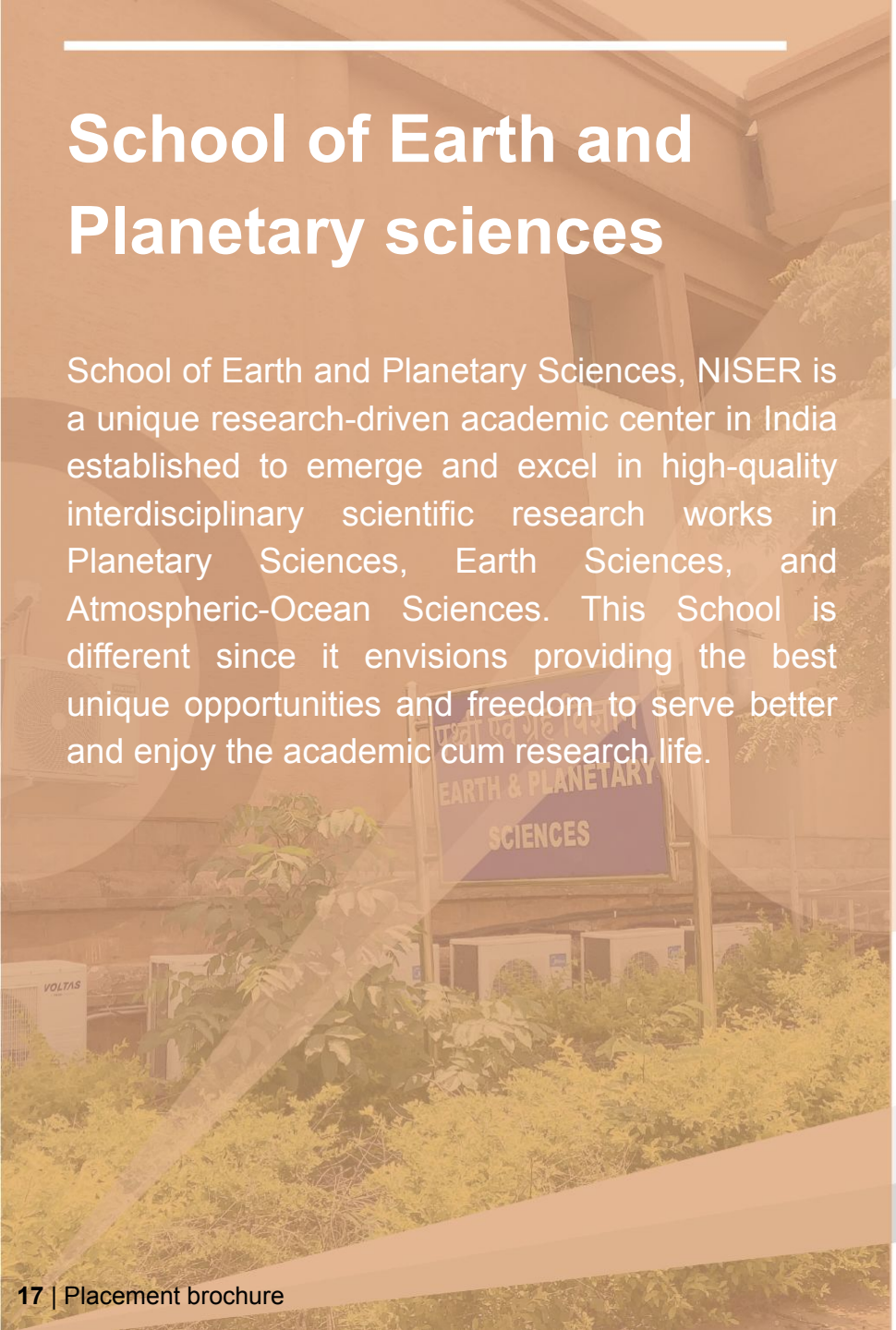
Rooplekha Khuntia, Assistant Professor
Ph.D IIT Kharagpur

"Out of your vulnerabilities will come your strength"

~ Sigmund Freud

School of Earth and Planetary sciences

School of Earth and Planetary Sciences, NISER is a unique research-driven academic center in India established to emerge and excel in high-quality interdisciplinary scientific research works in Planetary Sciences, Earth Sciences, and Atmospheric-Ocean Sciences. This School is different since it envisions providing the best unique opportunities and freedom to serve better and enjoy the academic cum research life.



Research & Development Scopes:

Planetary Sciences

- Exoplanets & Astrobiology
- Planetary Atmospheres
- Planetary Surfaces
- Planetary Formation & Astrochemistry
- Planetary Interiors & Dynamics
- Planetary Astronomy
- Planetary Exploration & Future Missions

Earth Sciences

- Solid Earth Geophysics
- Computational Geodynamics
- Geo-fluid dynamics

Atmospheric-Ocean Sciences

- Vegetation-atmosphere-climate coupling in the Amazon rainforest and the Himalayas
- Regional climatic impacts of land-use change
- numerical modeling of regional land-atmosphere coupling
- heatwaves and regional-scale effects

Matchless MENTORS

Jaya Khanna, Assistant Professor
Ph.D, Princeton University, USA

Guneshwar Thangjam, Assistant Professor
Ph.D, Max Planck Institute for Solar System Research(MPS)
Gottingen(enrolled in Clausthal University of Technologyu)(TUC)
Clausthal-Zellerfeld, Germany

Liton Majumdar, Assistant Professor
Ph.D., Astronomy & Astrophysics, November 2014, University of Calcutta, Kolkata, West Bengal, India

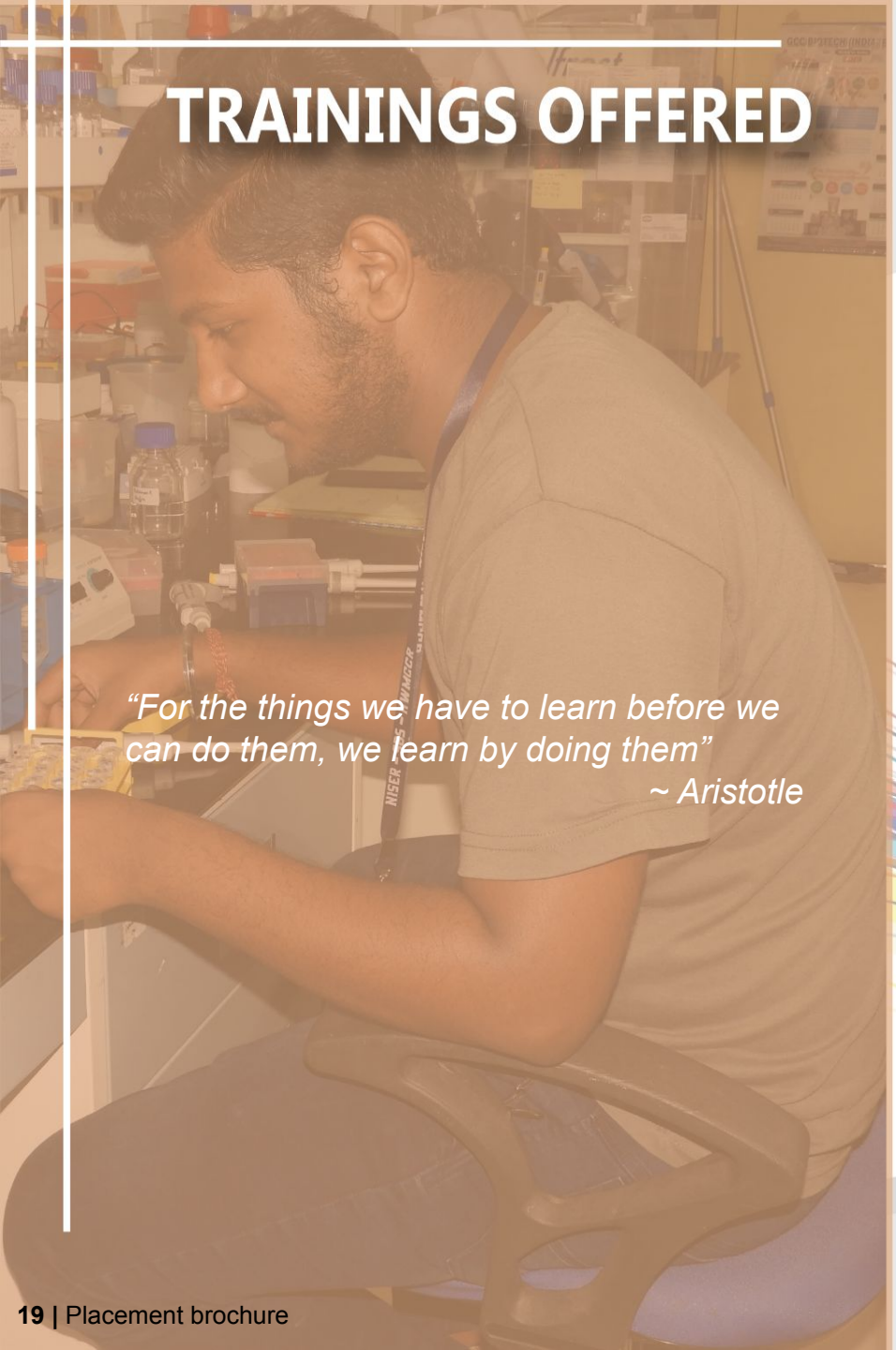
Pathikrit Bhattacharya, Assistant Professor

Ph.D, 2017 - Princeton University

"Failure will never overtake me if my determination to succeed is strong enough"

~ Dr. APJ Abdul Kalam

TRAININGS OFFERED



"For the things we have to learn before we can do them, we learn by doing them"

~ Aristotle

NISER offers its students multiple opportunities and platforms to develop and hone their skills of problem-solving, critical thinking, communication, and leadership and management. Specialized training is also offered in the form of workshops such as RAD@Astronomy, and Clinical research in cancer workshop. All departments regularly hold summer schools. Multiple conferences and meetings with international delegates allow students to explore various fields of research.

National Conference cum Workshop on Stress and Metabolic Syndrome, Indo-European symposium on Frontiers of Chemistry, National Conference On Science, Technology and Society, International Conference on Plant Developmental Biology & 3rd National Arabidopsis Meeting, Introductory School on Galaxy Formation, Workshop on Cyber Security 2018, Advance Instructional School on Stochastic Processes 2018, Workshop on Number Theory, ACM Summer School, and International Olympiad on Astronomy and Astrophysics, are a few of the numerous scientific gatherings that have taken place at NISER.

Apart from Institute organized training, students take the initiative to conduct training sessions where hands-on skills are imparted, and they also organize interdisciplinary talks inviting speakers from industry,and academia.

SKILLS OF STUDENTS

Besides mandatory requirements, students are actively encouraged to participate in professional skill development and networking activities such as workshops, colloquium, and conferences, making them well equipped to handle any challenge and perform optimally even outside their comfort zones.

Logical and Critical Thinking:

Critical thinking is fundamentally a process of questioning information and data; as a part of a research group, every student has to logically and critically analyze the topic or given unsolved problems to proceed further. Many such critical thinking assignments are part of students' theory and lab courses.

Reading and Study Strategies

Rigorous semester coursework and laboratory life encourage students to develop the ability to proficiently manage time. In addition to preparing for exams, they extensively read and analyze research papers to manage ongoing assigned research projects.

Co-curricular development:

Our student body, while smaller in number than comparable colleges and universities, still manage to organize almost all of the activities on par with other institutes. This leads to the active involvement of students in more than one dedicated club, such as Robotics, Astronomy, or Music.

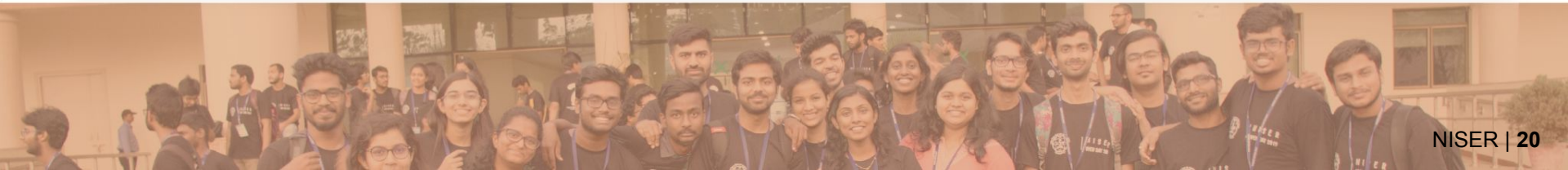
Research and presentation Skills

Not only are our students proficient in their research, but they are also adept at coherently presenting their data, an important skill to excel in their daily coursework and projects. While some take this in their stride, others find it much more challenging initially, which they ultimately overcome by the time they graduate with their thesis.

Writing and Communication Skills

In the course of the program, everyone has to do research and write a thesis at the end of the last semester. This process not only hones their research acumen but also leads to better communication skills, written or otherwise. Working on projects fosters continuous interaction with their lab members, PI, and thesis committee. The students as part of the evaluation process do not merely rely on rote memory but also focus on ways to understand and convey solutions efficiently.

NISER is well equipped with state-of-the-art research facilities at par with global standards, such as the NMR spectrometer, multiple types of mass spectrometers, single crystal, powder, and protein X-Ray diffractometers, field emission scanning microscopes, ultrafast laser systems, EPR facility, and many more.



STATE-OF-THE-ART FACILITIES

JEOL JEM F200 Transmission Electron Microscope

LYNX EVO, Vision engineering, Stereo Microscope

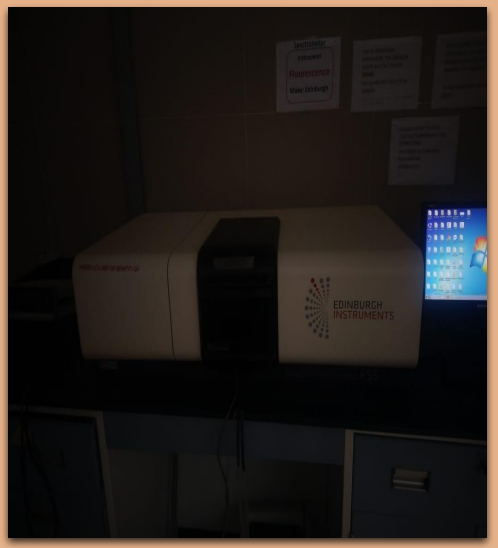
LabRAM HR Evolution, Horiba Scientific, Raman Spectrometer

Leica S8APO, polarizing microscope

Single Crystal XDR

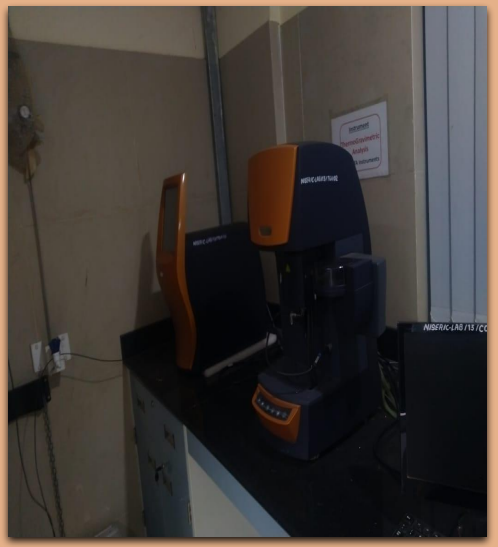
NMR-400 MHz

FT-IR



Spectrometer - Fluorescence

Power XDR



Gravimetric Analysis

PLACEMENT PROCEDURE

1. Placement cell invites companies to the campus.

2. Companies/Organizations will have to fill a Job Notification Form(JNF) containing the details of the job.

3. If pre-placement talks are needed, then a date will be fixed by the placement-cell.

4. Details of students are made available to the companies for prior short listing, if required.

5. Placement cell allots dates to companies for campus interviews.

6. Companies visit the campus, take tests/GDs/Interviews and furnish a final list of selected and withheld candidates to the placement cell .

7. Selected students are registered for jobs.

All procedures are supposed to be carried out online due to covid norms.

EVENTS

NISER has a wide array of student-run extra and co-curricular clubs, which remain active all year round. The typical structure of any club functions with a core committee to coordinate all volunteer activities. We have, currently active, 18 clubs in the cultural council under the general secretary of cultural affairs. They are the art club, ArC, Chess club, Dance club, Drama and Music club, Film club, Literary club LitC, Quizone quiz club, Photography club, Yoga club, and Zaariya- the social service club. We also have the NISER astronomy club, Brain Matters- a neuroscience enthusiasts' hub, Coding club, Science Activities club, RoboTech club with a funded lab, Mathematix club, nature club-Oorna, which expose the students to co-curricular education and provides hands-on training sessions in respective fields. The sports club boasts of talented players who demonstrate dedication and discipline in regularly organized inter batch tournaments.

IOAA(International Olympiad in Astronomy and Astrophysics) program

NISER was the host institute for the 10th IOAA program. Young astronomy students from 41 different countries recently participated in the International Olympiad in Astronomy and Astrophysics. It was an opportunity for pre-university students from various countries to meet and make friends with students with similar interests from all parts of the world. In this IOAA, 221 participants from 48 teams came and spent ten days together competing and interacting, from 9 to 19 December 2016 in NISER. Our hosting of the 10th International Olympiad in Moon Astronomy and Astrophysics was a part of our continuing tradition of encouraging young students to appreciate and enjoy the excitement of this oldest of pure sciences.

Open day

The NISER Open day is an annual event held in our Jatni campus to commemorate science day. This one-day program is organized by NISER students and caters to school students between the ages of 13 and 18. This event aims to reach out to society's young minds and encourage them to pursue a career in science. Over the course of the day, students visit laboratories within the Institute and attend talks on trending scientific discussions and discoveries presented by the faculty. Students of all departments demonstrate experiments and models, explaining scientific concepts in exciting and engaging ways.

Umang

The Cultural Council of NISER organised Intra-NISER Cultural Fest in collaboration with Student's Gymkhana(NISER). Our Cultural fest aims to give all students the opportunity to be involved in culturally enriching activities, give those students with unique talents a chance to extend themselves, grow in their area of expertise, and expand our students' appreciation of cultural activities. Events of Art, Dance, Music, Drama, Quiz, Fashion Show, Open Mic, Chess, Photography, Yoga, Short film making and Online Games were organized. Around 300 students participated in Umang, showcasing their talents. The major events in this Fest were Chess, Food Fest, Art on Cue, Short Film Making, Yoga Events, Rangreza, Monoranaga.

Dark Matter day

NISER organizes dark matter day every year. Global, regional, and local events are being planned on and around that date by institutions and individuals. They look to engage the public in discussions like what we already know about dark matter and many present-day and future experiments seeking to solve its mysteries. The event comprises an introductory dark matter video, followed by talks by some invited speakers. Finally, it concludes with a tour around some demonstration experiments explaining various dark matter concepts in an interactive and fun way.

Chandrayaan 2

The School of Earth and planetary sciences hosted an event of live streaming of Chandrayaan-II to create scientific curiosity and environment among the students. The event comprises an introductory video, followed by talks by some invited speakers.RoboTech Club, in collaboration with the Niser Astronomy club, developed a working model of **PRAGYAN Rover**, which was on-board Chandrayaan – II Mission of ISRO, to educate the audience.

IISM

Every year around December, institutes dedicated to promoting basic science and research like NISER, IISERs, CEBS-Mumbai, and IISc Banglore meet for an annual sports event, Inter IISER Sports Meet (most commonly known as IISM). Since its inception in 2012, IISM has been the symbol of sportsmanship, leadership, commitment, and solid but healthy competition. For the first time in December 2018, NISER hosted the event successfully and also stood 4th in position. NISERites never fail to give their best performances throughout such tournaments.

Foodfest

Zaariya, the social service club, provides campus residents with the platform to show their cooking skills and raise funds for the club. There were more than 30 participating teams, and the funds raised were used for various noble causes. The whole event was managed by student volunteers and coordinated by the core committee.

NISER ACHIEVEMENTS

HBNI was ranked 2nd in the country by the Nature Index 2020. Clarivate Analytics awarded NISER the India Research Excellence-Citation Award-2019.

HBNI, NISER's parent university, ranked 14 in NIRF university rankings.

A group of students from NISER batch 17 was selected for the national team to represent India in the International Physical Tournament-2019 in EPFL, Lausanne, Switzerland.

Dr. A Srinivasan and Dr. C Gunanathan, our faculty for the School of chemical sciences, are recipients of the prestigious CRSI medal.

Dr. Bedanga Mohanty and Dr. Ajay kumar Nayak of SPS made it to the list of top 2% scientists worldwide among all disciplines during a single calendar year 2017 and 2019 based on Stanford university's survey.

Our faculty includes Shantiswarup Bhatnagar awardees, Dr. Bedangadas Mohanty (SPS), Dr. TK Chandrashekar (SCS) and Dr. V Chandrasekhar (SCS), DBT Wellcome Trust Alliance awardee Dr. Mohammed Saleem, INSA young scientist Dr. Sutanu Roy (SMS), an elected fellow of IAS, Dr. Sayantani Bhattacharya (SPS), and associates of the IAS, Dr. Tuhin Ghosh and Dr. Ajaya Nayak (SPS).

Our teaching faculty also includes recipients of the Ramanujan fellowship-Dr Gunanathan, Dr. Khandai, Dr. Prolay Mal, Dr. Krishnan, Dr. Subhadip Ghosh, Dr. Ashish Nandi, Dr. Liton Majumdar, and Dr. Ajaya Nayak, Ramalingaswami fellow, Dr. Palok Aich, and many Early career research awardees.

Dr. Guneshwar Thangjam from our School of Earth and Planetary Sciences has an asteroid named after him, 11806 Thangjam.

Dr. Liton Majumdar of SEPS is a member of the Royal Astronomical Society.

Dr. Aniruddha Datta-Roy, of School of Biological Sciences, has a species of skink named after him- Eutropis dattaroyi, honoring his contributions to the field of herpetology.

Dr. Roy (SBS), and his team, discovered a new skink species in the Western Ghats, currently considered a vulnerable species. This discovery was featured in a national daily- The Hindu.

Dr. T.k Chandrashekar, Dr. Vadapalli Chandrasekhar, Dr. Bedangadas Mohanty, and Dr. Sudhakar Panda are elected fellows of all the three science academies of India (The Indian Science Academy in New Delhi, The National Academy of Sciences, Allahabad, India, Indian Academy of Sciences, Bengaluru).

The research work of Dr. Himanshu Biswal and Dr. Amarendra Das was published in newspapers.

Alumni and their achievements

"An institution's alumni are the reflection of its past, representation of its present and a link to its future."

An institution's alumni are the reflection of its past, representative of its present, and a link to its future. Our Alumni have brought great glory to our institution. They have set the example of being a successful and good human being. They inspire us to have a clear conscience, the courage to speak the truth, and the importance of being authentic.

Our alumni are part of several companies and Institutes such as ISRO, BARC, Facebook, MIT, OXFORD, YALE, UNIVERSITY OF CHICAGO, Texas, Max Planck, IISc, IIMs, Cipla, among others. Some of the alumni are faculty at universities such as IIT, TIFR, HRI.

Some of them are listed below:

Dr Amit Kumar
Assistant professor of Mathematics at NIT-Andhra pradesh.

Dr Mohammed Nasim
Faculty at IISER Berhampur.

Dr Sandeep Chatterjee
Faculty at IISER Berhampur.

Dr Chitrasen Jena
Faculty at IISER tirupati.

Dr Sabhyasachi Ghosh
Faculty at IIT Bhilai.

Shorba Bhattacharya
secured a 1st rank in NET 2017

Pavan
secured a 2nd rand in NET 2019

Dr Sesa Dev
Research Associate at Georg-August University of Gottingen, Germany.

Mr. Vijay J Iyer
became the first recipient of the Rajendran Raja Fellowship of Fermilab.

Dr. Sandeep Rana
Data Scientist, ARP Investment

Dr. Minaxi Sharma
Managing Member, Ample Electrical Solution.

Dr. Samir Kumar
Assistant Professor, JaiPrakash Narayan University, Bihar

Dr. Sabita Das
Assistant Professor, KKS Women's College.

MoU and Collaborations

NISER has signed MoU's with several research institutes and universities across the world, aiming to enhance R&D capacity to benefit both the signatories involved.

1. University of Cologne
2. Wigner Research Center for Physics, Hungarian Academy of Sciences
3. Institute of Life Sciences, Bhubaneshwar
4. DAAD
5. Max-Planck partner group
6. ALICE collaboration
7. Jagiellonian University, Poland

ALICE

JAGIELLONIAN UNIVERSITY IN KRAKÓW

wigner

MAX-PLANCK-GESELLSCHAFT

Institute of Life Sciences

DAAD Deutscher Akademischer Austausch Dienst German Academic Exchange Service

University of Cologne

STUDENTS PLACEMENT CELL

Students Placement cell

National Institute of Science Education and Research
Tehsildar Office, Khurda, Pipli, Near, Jatni, Odisha 752050
Email - spc@niser.ac.in | Website -

Faculty Incharge

Dr. Renjith Mathew
(Dean of Student Affairs)

Administrative Officer

Rajeev Kumar Singh

Placement representatives

Tanya Pattnaik - 8118031373 | Arnav Paul - 7800207734 | Ashish Shukla - 7608094027
Abhishek Anil Deshmukh - 6370504297
Tata Satya Pratheek - 8500861867
Nikhil Kumar - 9470431483 | Kanishk Kumar - 6370630981

NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH

Tehsildar Office, Khurda, Pipli, Near, Jatni, Odisha 752050

Website - www.niser.ac.in | Email - spc@niser.ac.in

Designed and edited by Karunakar Majhi