

# NISER WISER/SCIFINDER/VIBES

(NISER Newsletter, Vol.1, Issue 1, Jan-June 2012)



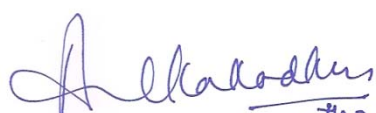
NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH,  
BHUBANESWAR

FOSTERING AVANT-GARDE LEARNING AND CUTTING EDGE RESEARCH

NISER has now reached a point where its first batch has graduated and its education and research activities have taken roots. We of course have yet to reach the goals that have been identified in the NISER project report. As a part of nurturing a holistic learning environment that facilities working on the frontiers of knowledge, we need to create an ambience for sustained exchange of ideas and awareness about each other's achievements. I do expect the newsletter to be a major contributor towards this objective.



I wish the newsletter all successes.

  
(Anil Kakodkar) 4<sup>th</sup> Dec 2012

We at NISER firmly believe that innovative approaches and contribution to the existing knowledge pool will hold the key to making the presence of NISER felt in the global knowledge community. That said, we must pull up our socks to graduate from taking baby-steps to giant-strides by furthering the intellectual environment that we have been silently grooming. Such growth would depend entirely on the vision driven actions, quality of inputs, leadership, and commitment from the entire NISER family. Hence we must create windows of opportunity and strengthen our system so that we take the work done here to bigger stages, envisaging a day when we would be challenging only ourselves. Like many established institutions, we are not so blessed with the required infrastructure let alone the desired ones. However, with the new campus being constructed as we do our chores from the transit campus we can lay down our plans well in advance. – Prof. T K Chandrashekar, Director



An autonomous Institute under the Department of Atomic Energy, Govt. of India and a unique one of its kind, NISER continues to strive to be recognized as a centre of excellence in science education and research in Basic Sciences and related areas.



Currently operating out of its transit campus with over 300 students spread over five batches of students admitted to the flagship **MSc programme** through NEST in **Biology, Chemistry, Physics and Mathematics** and **Doctoral Programme** in all Basic Sciences. Going forward NISER would spread its wings with undergraduate programmes in the areas of **Earth and Planetary Science, Computer Science** and **MSc-PhD dual degree**.

The vibrant and extremely talented faculty members drawn from the most reputed institutions and universities across the globe have set highest standards for themselves. At NISER they are committed to nurture world class scientists and prepare the students to take up cutting edge research and neo-age teaching assignments in academia, R&D labs and industries.



‘The new campus at Jatni is coming up in a big way. The campus would have a prayer hall on the hill top, five schools of different specialties, nine hostels of 250 rooms each, two aquatic centres, a healthcare centre, a primary school, an animal house and a guest house. Rain water harvesting and natural day lighting will be prominent "green" features of NISER. We hope to move there by 2014 into a world class environment for teaching, learning and research’- *Dr. A K Naik, Registrar*

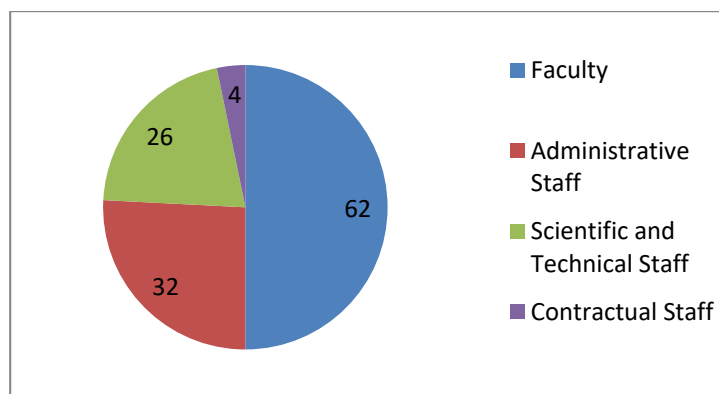




NISER gave us the right kind of environment to chase our dreams -Mahima Sneha (5<sup>th</sup> yr, Chemistry)

NISER's state-of-the-art facilities and the guidance from the teachers are second to none. -Adithya Kuchibhotla (5<sup>th</sup> yr. Physics)

## From baby Steps to Giants Strides



## Spreading the wings

The Institute is currently operating out of its transit campus at Institute of Physics along the Sachivalay Marg of the capital city of Odisha. An academic-cum-administrative building of 5000 Sq. mtrs has been constructed to meet the interim purpose. All the academic and administrative activities are being carried out from this stand alone building. A hostel for girls of 1781 Sqr. mtrs has also been constructed inside Institute of Physics campus. It has thrown open the dining facility for the entire NISER family in addition to the inmates of the hostel.



Despite the physical constraints, various laboratories of the schools of Physics, Chemistry, Mathematics and Biology NISER are well equipped with state-of-the-art facilities to provide the students the required if not the best opportunities. The Institute has initially spent Rs 56 crores for all these laboratories in this transit campus. Some of the major facilities created in the transit campus include:

#### **School of Chemical Sciences**

- State-of-the-art NMR Spectrometer for 1D and 2D Experiments
- GC Mass and ESI Mass Spectrometers
- Time-Resolved Fluorescence Spectrometers

#### **School of Physical Sciences**

- Ultrafast Time-resolved Spectroscopy for quantum life measurements of molecular dynamics
- Ultracold atoms and BEC facility using atom trapping by lasers
- Facility of Magnetic nanostructures and multilayers

#### **School of Biological Sciences**

- Confocal Microscope Facility
- Micro-array facilities for Genomics
- DNA sequencing and Surface Plasmon Resonance Facility

#### **School of Mathematical Sciences**

- A state-of-the-art Computing facility and a High Performance Computing Cluster for theoretical calculations.

#### **Flag bearers (graduating batch 2007-12)**



Out of 35 students graduated in June 2012 eleven went abroad to pursue PhD programmes with fellowships from esteemed places like Stanford, Carnegie Mellon, Pennsylvania, Chicago, Stony Brook, etc. Another five students have chosen Tata Institute of Fundamental Research (Mumbai), two are joining Indian Institute of Science (Bangalore), four have zeroed on National Institute of Immunology (Delhi) and four others are going to different Indian Institutes of Technology for their PhD programmes. We take immense pride to announce that 30 out of 35 graduating students are all set to pursue doctoral programmes at reputed universities across the globe which reinforces the mandate that NISER is committed to create quality manpower for research in different areas of basis sciences.

## Faculty Achievements

### Awards and Recognition

**Prof. T. K. Chandrashekar** received from the Honourable Prime Minister of India, the coveted Dr. Kothari memorial Gold Medal of Indian Science Congress in 2011.

Prof. T. K. Chandrashekar, appointed as the Chairman of Project Advisory Committee (PAC) of DST, Govt of India, in Inorganic Chemistry for a period of three years (2012-2015)



Dr. Badireenath of SBS has been awarded the Innovative Young Biotechnologist Award for the year 2011" from DBT, Govt. of India. The Award comes with a cash prize of Rs. 1 lakh per year for three years in addition to a three year research project. He had earlier received Sri Edupuganti Venkataramaiah and Smt. Padmavathi Memorial Gold Medal from Association of Biotechnology and Pharmacy (ABAP) in Sept 2010

Dr. Palok Aich of SBS holds the esteemed Ramalingaswami Fellowship. Dr. Aich is the Managing Editor of 'Frontiers in Biosciences' and the Associate Editor of 'Current Bioinformatics'. He is also in the scientific advisory board of World Vaccine Congress since 2008.



**Dr. C Gunanathan** and **Dr. V Krishnan** of SCS bagged the prestigious Ramanujan Fellowship, 2011 from DST, Govt. of India



**Dr. C S Purohit** of SCS received the RC Tripathy Young Scientist Award by the Orissa Chemical Society in Dec 2011



### New Feathers in NISER Cap

Since its inception, NISER has been growing from strength to strength in terms of recruiting bright members into its family. During January-June, 2012 NISER added six new faculty members to its already vibrant pool.

**Dr Nagendra K. Sharma** joined School of Chemical Sciences at NISER as an Asst Professor in February 2012.



Dr. Sharma holds a PhD degree from National Chemical Laboratory (NCL)& University of Puna, Pune and worked as Post Doctoral fellow at University of Utah(USA)and then visiting faculty at SCS-NISER before joining NISER. His areas of research and teaching interests include : Chemical syntheses and biological studies of bioactive natural products, nucleic acid, peptide and their analogues.

**Dr Subhadip Ghosh** joined the School of Chemical Science as an Asst Professor, in May 2012

Dr Ghosh holds a PhD 2009 from Indian Association for the Cultivation of Science, Kolkata. He did his post doctoral research at University of Texas at Austin, USA and at Riken, Japan before joining NISER. Dr Ghosh has specialization in Single Molecule Spectroscopy, Molecular Dynamics and his research interests include: Fluorescence Correlation Spectroscopy (FCS) study on Protein/RNA/DNA, Single molecule excitation anisotropy study of solar cell relevant polymers (i.e. MEH-PPV), Fluorescence Lifetime Imaging (FILM), Electron transfer, Proton transfer, Solvation dynamics, FRET.



**Dr Rudresh Acharya** joined School of Biological Sciences as an Asst Professor, in May 2012



**Dr Sumanta Bagchi**, joined the School of Biological Sciences as an Asst Professor, in May 2012. Dr Bagchi did his PhD from Syracuse University, NY, USA. He worked as a post-doctoral associate in Texas A&M University, TX, USA for three years before joining NISER. Dr Bagchi's research areas include: Ecosystem function and services, Biodiversity and Global change, Coupled human-natural ecosystems, Plant-herbivore interactions, Wildlife conservation

**Dr. Bedangadas Mohanty** joined School of Physical Sciences as an Associate Professor in June 2012.



Dr Mohanty holds a PhD degree from Institute of Physics, Bhubaneswar and was a Post Doctoral fellow at Lawrence Berkeley National Laboratory. He was a scientist at the DAE unit of Variable Energy Cyclotron Centre, Kolkata before joining NISER. His areas of research include study of the QCD phase diagram and properties of quark gluon plasma using relativistic heavy-ion collisions.

He is a recipient of DST Swarnajayanti Fellowship, DAE-SRC Outstanding researcher award, DAE young scientist award, INSA, New Delhi medal for young scientist and an Associate of IAS, Bangalore during his research career. He is currently the deputy spokesperson of the US based experiment STAR at Brookhaven National Laboratory, New York.



**Dr. Tirumala Kumar Chowdary** joined School of Biological Sciences at NISER as an Assistant Professor in June 2012.

Dr. Chowdary did PhD in Life Sciences from Centre for Cellular and Molecular Biology, Hyderabad. Before joining NISER, he worked at Tufts University School of Medicine, Boston as a Postdoctoral Research Associate. Dr. Chowdary's research and teaching interests include virology and structural biology.

## Colloquiums

- Prof. J V Narlikar, IUCAA, Pune, 6 January 2012, Physics
- Prof. Amitabh Chattopadhyay, CCMB, 10 February, 2012, Biology

## Seminars

- 1, Dr. Bedang Mohanty, VECC, Kolkata, 16.01.12, Physics
- 2, Dr. Prolay Mal, Saclay, France, 20.01.12, Physics
- 3, Dr. Manoranjan Kumar, Princeton University, New Jersey, 01.02.12, Physics
- 4, Prof. Marios Petropoulos, CNRSs, 13.02.12, Physics
- 5, Prof. Arpad Szallasi, Monmouth Medical Centre, New Jersey, 16.02.12, Biology
- 6, Prof. Y.N. Mohapatra, IIT Kanpur, 20.02.12, Physics
- 7, Dr. David Sandstrom, NIMH, NIH, 23.02.12, Biology
- 8, Dr. Rahul Roy, ISI, Delhi, 10.04.12, Mathematics
- 9, Prof. Shiraz Mirwalla, TIFR, Mumbai, 02.04.12, Physics
- 10, Prof. Kajari Majumdar, TIFR, Mumbai, 31.05.12, Physics

## Permanent campus at Jatni



NISER is now midway through the construction work of its permanent campus over 298 acres of land at Jatni, in Khurda District, about 4kms from Khurda railway station, about 20kms south of Bhubaneswar Railway Station and about 25kms from the existing Bhubaneswar airport. L&T (ECC) has been entrusted with the responsibility of construction of the campus. The facilities in the new campus would include: separate buildings for the schools of Physics, Chemistry, Mathematics, Biology, Computer Science and Humanities. 130000 sq mtrs of residential space accommodating 11 hostels for boys and girls, faculty housing, staff quarters, auditorium, school, post office, hospital, playground, a unique yoga centre on the hill top, etc. are coming up to give the campus a holistic look. In addition to these, facilities for a green house, an animal house, rainwater harvesting, fire fighting, sewage water plants, etc. will also be in place. The work started in the month of July 2011 and the progress looks pretty much on track as of now. As envisaged, we plan to start out 2014 academic session from the new campus.

# 'ନାଇଜର' ନିର୍ମାଣ କାର୍ଯ୍ୟ ଆରମ୍ଭ ହେଲା



ଭୁବନେଶ୍ୱର, ୨୯ ମାର୍ଚ୍ଚ: ଭାରତର ପ୍ରଥମ ସରକାରୀ ନିର୍ମାଣ କାର୍ଯ୍ୟ ଆରମ୍ଭ ହେଲା। ନିର୍ମାଣ କାର୍ଯ୍ୟ ଆରମ୍ଭ ହେବା ପରେ ନିର୍ମାଣ କାର୍ଯ୍ୟ ଆରମ୍ଭ ହେଲା।

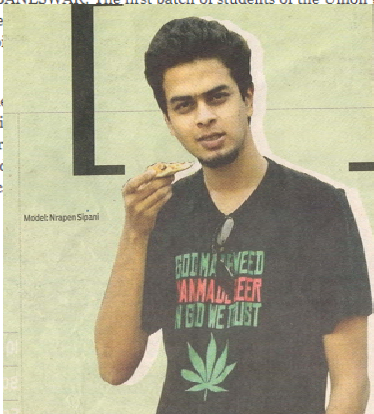
## First batch of students from govt science institute clinch handsome global offers

Ashok Pradhan, TNN Feb 22, 2012, 06:50AM IST

Tags: Yale University | University of Utah | University of Illinois | Stanford University | Cornell University

**BHUBANESWAR:** The first batch of students of the Union government of Science Education and Research (NISER), Bhubaneswar, have clinched handsome global offers from top universities.

While outside other in the world towards physics



## Food for thought Business Standard

Students of National Institute of Science Education and Research (NISER), Bhubaneswar, love to gorge on...

**Cult favourite**  
The really spicy *gool gappa* filled with potatoes and onions, made sour with the juice of dry mangoes is something they can have anytime and anywhere.

**Sinful fantasy**  
Dark chocolate pastries with chocolate topping that has been heated just to melt to chocolate to a syrupy level is the best dessert for the students on any occasion.

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## 35 students graduate from NISER, BBN, 11 to go abroad

Press Trust of India / Bhubaneswar June 27, 2012, 20:06

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Of the 35 graduates passing from National Institute of Science Education and Research (NISER), Bhubaneswar this year, 11 students are all set to pursue PhD programme abroad with fellowship while five others have chosen the Tata Institute of Fundamental Research (TIFR), Mumbai.

"I am personally happy over the achievement of students here because of my involvement in opening of Niser, Bhubaneswar," Anil Kakodkar, Chairman, Board of Governors, NISER, said.

Asking the students to work for the society and the nation, Kakodkar said that the knowledge acquired from the institute should be of help to the common people. "I wish that the students of NISER serve the nation by doing good research work," he said.

Chairman of Atomic Energy Commission R K Sinha cited several instances on

## First batch of NISER students clinch handsome global offers

# The Telegraph

calcutta, india

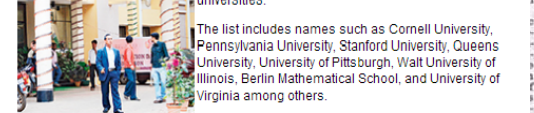
Edition | Saturday, March 31, 2012 | Google

Front Page > Odisha > Story

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## Niser students make it to top schools

**PRIYA ABRAHAM**  
Bhubaneswar, March 30: The first batch of students from Niser (National Institute Science Education and Research) will graduate in May, but most of them have already made it to some of the world's top ranked universities.



The list includes names such as Cornell University, Pennsylvania University, Stanford University, Queens University, University of Pittsburgh, Walt University of Illinois, Berlin Mathematical School, and University of Virginia among others.

The Niser campus in Bhubaneswar. Picture by Sanjib Mukherjee

Of the total 34 students who will be passing out after two months, 14 students have chosen to go overseas to pursue higher studies while others have opted to continue research in institutes such as Bhabha Atomic Research Centre (Barc) and Tata Institute of Fundamental Research (TIFR).

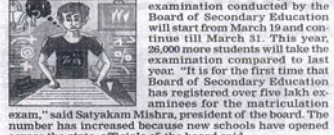
Of the 24 students who appeared for the Barc tests, 16 qualified. Of the 18 students who appeared for the TIFR entrance, 12 have qualified.

This year the institute received about 16,000 applications for its 60 seats.

"We were supposed to increase the seat strength to 80 this year, but could not do so for lack of infrastructure. The intake can be increased once we move to our new campus," said registrar A K Naik.

## 5.11 lakh to appear for matric exam

TIMES NEWS NETWORK



**Cuttack:** As many as 5.11 lakh students will appear for the HSC examination this year. The examination conducted by the Board of Secondary Education will start from March 19 and continue till March 31. This year, 26,000 more students will take the examination compared to last year. "It is for the first time that Board of Secondary Education has registered over five lakh examinees for the matriculation exam," said Satyakam Mishra, president of the board. The number has increased because new schools have opened across the state, officials of the board said.

To know more about NISER please visit [www.niser.ac.in](http://www.niser.ac.in)

National Institute of Science Education and Research  
Institute of Physics Campus, Sachivalay Marg, PO- Sainik School, Bhubaneswar-751005  
Phone: +91 674 2304000, Fax: +91 674 2304036