

June 2019



अणुविद्या

HBNI NEWSLETTER



होमी भाभा राष्ट्रीय संस्थान
Homi Bhabha National Institute

(परमाणु ऊर्जा विभाग की एक सहायक संस्था और यूजीसी
अधिनियम 1956 की धारा 3 के तहत विश्वविद्यालय माना जाता है)
(An aided institution of the Department of Atomic Energy and
a Deemed-to-be university under section 3 of the UGC Act.1956)

Location of HBNI Central Office, Constituent Institutions & Off Campus Centre





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HBNI NEWSLETTER

JUNE 2019

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The core mandate of HBNI is education in the domain of nuclear science and technology. The name of the newsletter “अणुविद्या” reflects this mandate.



प्रो. पी.आर. वासुदेव राव

कुलपति

Prof. P.R. Vasudeva Rao

Vice-Chancellor



होमी भाभा राष्ट्रीय संस्थान

प्रशिक्षण विद्यालय परिसर, अणुशक्तिनगर, मुंबई-400 094, भारत

Homi Bhabha National Institute

Training School Complex, Anushaktinagar, Mumbai – 400 094, India

Tel. No. 91-22-25503385 • Fax : 91-22-25503384

• Email : vasudeva@hbni.ac.in

Foreword

It gives me great pleasure to present to you the first issue of HBNI Newsletter, being brought out on the special occasion of the celebration of the Foundation Day of HBNI. From its inception in the year 2005, HBNI has steadily grown in terms of its academic programs, number of students and faculty, infrastructure and last but not the least, academic rigour. It is no wonder that HBNI has risen to the 17th rank among Universities in the 2019 NIRF exercise. Our performance data indicate that we have the potential to rise further.

The main contribution to the status of HBNI comes from the eleven institutions under DAE which are the constituent institutions (CIs) / off-campus centre (OCC) of HBNI. The purpose of this newsletter is to provide a report on the progress of HBNI in the last year (2018-19) in various fronts, and also reflect the achievements and honours received by the faculty and students of the CIs and OCC. Several outreach programs have been taken up at the CIs, OCC as well as Central Office; several improvements in procedural aspects have been made at the Central Office as part of our endeavor to encourage excellence, reduce time frame for decision making, enhance collaborations between CIs/OCC, start new courses, record and make available lecture programs to students across CIs/OCC, etc. The newsletter provides us an opportunity to disseminate such information also to our faculty/students spread across the country.

It is my pleasure to acknowledge the support and guidance HBNI has always received from DAE, the Council of Management and Academic Council. The continuous improvement in academic performance of HBNI has been made possible by the efforts put in by Boards of Studies and the Deans(Academic), Deans(Student Affairs) and Nodal Officers at our CIs/OCC, besides the committed efforts of colleagues at HBNI Central Office. I am sure that the unique structure of HBNI and the synergy between the different institutions under HBNI would continue to propel us in growth path, and each forthcoming issue of the Newsletter will have lots of good news to report !

(P.R.Vasudeva Rao)



प्रो. एस. बनर्जी

कुलाधिपति

Prof. S. Banerjee

Chancellor



होमी भाभा राष्ट्रीय संस्थान

प्रशिक्षण विद्यालय परिसर, अणुशक्तिनगर, मुंबई-400 094, भारत

Homi Bhabha National Institute

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Message

I am delighted to know that on the occasion of Foundation Day celebration of Homi Bhabha National Institute (HBNI) on June 3, 2019, the inaugural issue of the HBNI Newsletter will be released. It is a welcome initiative by HBNI as this publication is expected to have a great impact in promoting interactions among various Constituent Institutions (CIs) / Off Campus Centre (OCC) of HBNI and between students and members of faculty who are spread across the country. Since its inception as a deemed-to-be-university on June 3, 2005, HBNI has made very fast progress in various aspects of academic excellence. HBNI securing 17th place in the national ranking of Universities, as recently announced by National Institution Ranking Framework (NIRF), is one of the indicators of HBNI's advancement.

One of the objectives of the creation of HBNI was to promote academic links between research centres and autonomous institutions within the Department of Atomic Energy (DAE). This has also opened up enormous possibilities for the scientific fraternity in DAE in pursuing life-long learning and in advancing and broadening their research interests. The teaching-learning environment in all DAE institutions has witnessed a significant upliftment since the foundation of HBNI. Multi-disciplinary research and collaborations between the CIs / OCC of HBNI have also grown in the recent past.

Activities in the CIs / OCC of HBNI span across basic research to the development of technologies to their large-scale deployment. Scientists and engineers within these institutions, while pursuing research in frontier areas of science and technology, often get the opportunity to translate the fruits of their work into something which make a huge societal impact. With wide-ranging research facilities in different scales of operation, with increased induction of bright students through stiff national level competition and with the opportunities of co-operation and migration of members of faculty from one discipline or institution to another, HBNI will undoubtedly secure a unique position in the comity of world-class universities in the near future.

Srikumar Banerjee

(S. Banerjee)

के. एन. व्यास
K. N. Vyas



भारत सरकार
Government of India

अध्यक्ष, परमाणु ऊर्जा आयोग
व
सचिव, परमाणु ऊर्जा विभाग
Chairman, Atomic Energy Commission
&
Secretary, Department of Atomic Energy



MESSAGE

I am glad to learn that HBNI is bringing out the first issue of HBNI Newsletter to mark the occasion of the Foundation Day celebration of HBNI on 3rd June 2019. I am immensely happy to note that the Newsletter will highlight several facets of the progress of HBNI, such as the important events organized, the achievements and honours received by the faculty and students of the constituent institutions (CIs) / off-campus centre (OCC), and also other initiatives undertaken by HBNI centre office for smooth and efficient management of various activities. The Foundation Day celebration is an apt occasion to initiate the publication of the inaugural issue of the HBNI Newsletter.

In a short span of time, HBNI has emerged as one of the important national institutes, the recent 2019 NIRF University ranking placing HBNI at the 17th position, endorses its achievements. HBNI's eleven CIs/OCC are repositories of diverse and advanced scientific & technological knowledge, and I am glad to acknowledge that HBNI is efficiently tapping the uniqueness of these institutes to formulate programs relevant to DAE and Society for present and future needs. I am quite sure that HBNI will become one of the best Institutes of the World by providing high-quality academic programs to its students for becoming leaders and pioneers in science & technology.

I wish all the success to the Foundation Day celebration of HBNI and congratulate the Vice-Chancellor and his team for bringing out the inaugural issue of the HBNI Newsletter.


(K.N. Vyas)





Srikumar Banerjee
Chancellor, HBNI



K. N. Vyas
Secretary, DAE & Chairman, AEC



P. R. Vasudeva Rao
Vice-Chancellor, HBNI



A.K. Mohanty
Director, BARC



Amitava Roy
Director, VECC



Sudhakar Panda
Director, NISER & IOP

*Council of Management**



Rajendra Badwe
Director, TMC



Mustansir Barma
Professor Emeritus, TIFR



Sukhbir Singh Sandhu
Addl. Secretary, (H.E.) MHRD



P.D. Naik
Dean, HBNI



Surendra Prasad
Chairman, NBA



Sudha Krishnan
Member (Finance), AEC

*As on March 31, 2019

About Foundation Day

The Foundation Day marks the day on which HBNI was notified as a Deemed to be University under section 3 of the UGC Act 1956.

The Department of Atomic Energy (DAE) was established in 1954, with a mandate for Research, including the fundamental research in matters connected with the Atomic Energy and the development of its uses in agriculture, biology, industry, medicine and advancement of higher mathematics. In pursuit of its mandate, DAE has established research and development centres as well as grant-in-aid institutions. For developing well-trained manpower to fulfil its mandate, DAE founded the Training School at the Atomic Energy Establishment Trombay (AEET) in 1957. The 'Training Schools' offer a well-designed compact one year intensive programme for fresh engineers and scientists giving them a sound knowledge base in nuclear science and technology. For historical reasons, the name of 'Training School' continues, however, given the depth and range of its programmes, it essentially functions as a 'Graduate School'.

Considering the continued growth in the atomic energy relevant for the country at large and the continued expansion of atomic energy programme, and the sustained emphasis on development of high-quality human resources with updated knowledge and skills, in 2003, the DAE Science Research Council, with Dr. Raja Ramanna in the Chair, recommended the establishment of Homi Bhabha National Institute having deemed to be university status after accreditation with the appropriate authorities. To advise the Department on all aspects of the setting up of the HBNI, a Steering Committee with Prof. P. Rama Rao, former VC, Hyderabad University as Chairman was set up by the Department. The Committee drafted a proposal for submission to the Ministry of Human Resource Development (MHRD) and the University Grants Commission (UGC) in consultation with all possible constituent institutions. After all internal approvals, a proposal was submitted to the MHRD and the UGC by the Secretary, DAE.

After completion of further steps as stipulated by the UGC, an Expert Committee chaired by Prof. S.K. Joshi was appointed by the UGC and it visited Trombay on March 28, 2005, to interact with the team from the HBNI and day-long deliberations were held with the HBNI team. Based on the report of the Expert Committee and its acceptance by the MHRD, the HBNI was notified as a deemed to be university on June 3, 2005, and started its academic programmes in 2006.

The celebration of the Foundation Day is indeed an important opportunity to recollect the objectives and mission behind the setting up of HBNI and encourage excellence in pursuit of the academic programs through the presentation of awards to outstanding students.

Profile of Chief Guest

(Foundation Day - 2019)



Prof. Anil Dattatraya Sahasrabudhe

Prof. Anil Dattatraya Sahasrabudhe, Professor of Mechanical Engineering at Indian Institute of Technology (IIT), Guwahati is currently Chairman of All India Council for Technical Education (AICTE). Prof. Anil D. Sahasrabudhe graduated from BVB College of Engineering and Technology, Hubli affiliated to Karnataka University, Dharwad, Karnataka in Mechanical Engineering with First Rank and Gold medal in 1980. Subsequently, he obtained Master's and Doctoral degrees from Indian Institute of Science (IISc), Bangalore in 1982 and 1989 respectively.

Prof. Anil D. Sahasrabudhe has held several important Academic, Research and Administrative positions at Indian Institute of Science, Bangalore, Tata Consulting Engineers, North Eastern Regional Institute of Science and Technology (NERIST), Itanagar (Arunachal Pradesh) and IIT Guwahati. He also served as Director, College of Engineering, Pune (CoEP) since 2006 on deputation from IIT, Guwahati prior to joining as AICTE Chairman. As an academician and researcher in NERIST and IIT Guwahati, and as an administrator in the capacity of Director, CoEP, he has taken up several new initiatives for Academic, Curricular & Co-curricular activities, Entrepreneurship, Research and Good Governance.

Prof. Anil D. Sahasrabudhe is presently working as Chairman & Expert Member on various National Level Committees. Some of these include; Chairman, Basic Scientific Research (BSR), Empowered Committee of UGC, SWAYAM Board and Chairman BOG of NIT Itanagar. As a Fellow of ISTE, IET, Institution of Engineers (IE), INAE and member of ASME, ASEE and ASI, he is actively involved in the activities of the Professional Bodies/Societies.

He was awarded with "Maha-Intrapreneur Award-2011" of Praj Industries, Pune, for his Leadership and Innovative abilities in the area of Technology Development and Entrepreneurship initiatives. He was also awarded Jeevan Gaurav Puraskar (Life Time Achievement Award – for remaining an Inspiring Teacher throughout) from MIT World Peace University, Pune, in 2019.



ABOUT HBNI

- Established in 2005 as a Deemed-to-be University under section 3 of the UGC (University Grants Commission) act 1956.
- Recognised as a Grant-in-aid institution of Department of Atomic Energy in 2014.
- Accredited as Grade 'A' institution by National Assessment and Accreditation Council (NAAC).
- Placed 17th among the Universities in India in NIRF 2019 ranking by Ministry of Human Resource Development, Govt. of India.
- In 2018, HBNI was placed in the category of institutions accorded the highest level of autonomy by UGC, based on its NAAC grading.
- The Nature Index 2018, brought out by the renowned Journal Nature, placed HBNI in the third position among Indian academic institutions with respect to publications in Nature group of Journals during 2017.
- State of art research infrastructure including mega research facilities.
- Challenging research programs.
- Internationally renowned research guides.
- All academic programs duly approved by statutory bodies.
- DAE Fellowships on par with UGC guidelines or higher.
- Foreign Travel Assistance to doctoral students for participation in International Conference, Symposia, Scientific meetings.



ABOUT HBNI

The HBNI brings together ten premier DAE institutions established as Research and Development Centres and grant-in-aid autonomous centres as Constituent Institutions, under a single research driven framework. NISER Bhubaneswar, set up in 2006, was also declared as Off Campus Centre (OCC) of HBNI in February 2016.

The following are the institutions under HBNI academic research framework:

- ❖ Bhabha Atomic Research Centre (BARC), Mumbai
- ❖ Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam
- ❖ Raja Ramanna Centre for Advanced Technology (RRCAT), Indore
- ❖ Variable Energy Cyclotron Centre (VECC), Kolkata
- ❖ Saha Institute of Nuclear Physics (SINP), Kolkata
- ❖ Institute for Plasma Research (IPR), Gandhinagar
- ❖ Institute of Physics (IoP), Bhubaneswar
- ❖ Harish-Chandra Research Institute (HRI), Allahabad
- ❖ Institute of Mathematical Sciences (IMSc), Chennai
- ❖ Tata Memorial Centre (TMC), Mumbai and
- ❖ National Institute of Science Education and Research (NISER), Bhubaneswar

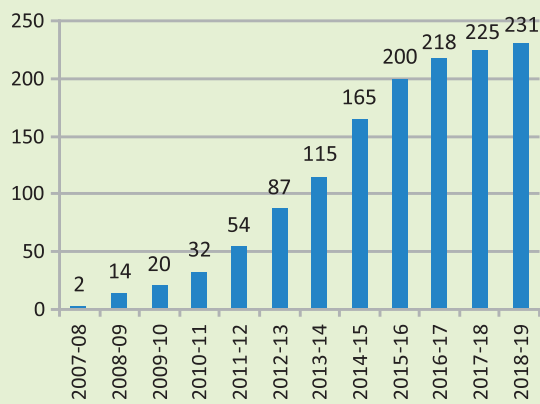
Memorandum of Understanding between Homi Bhabha National Institute and other Institutes :

- ❖ Indian Institute of Science, Bangalore
- ❖ Indian Institute of Technology, Bombay
- ❖ Indian Institute of Technology, Kharagpur
- ❖ Indian Institute of Technology, Kanpur
- ❖ Indian Institute of Technology, Madras
- ❖ Institute of Chemical Technology, Mumbai
- ❖ Chennai Mathematical Institute, Chennai
- ❖ Jadavpur University, Kolkata
- ❖ Jawaharlal Nehru University, New Delhi
- ❖ Panjab University, Chandigarh
- ❖ Tata Institute of Fundamental Research, Mumbai
- ❖ The Commissariat a l'energie atomique et aux energies alternatives, France

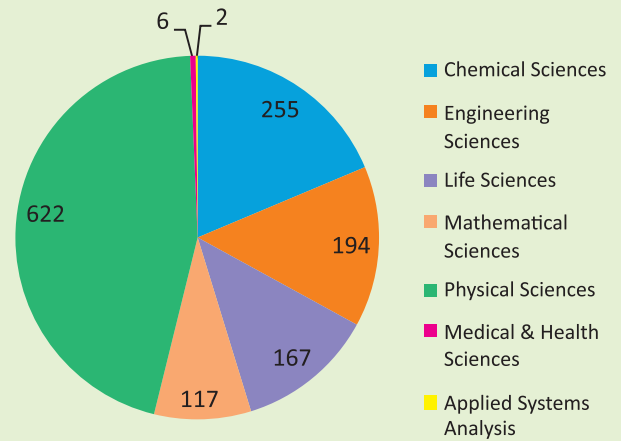


INSTITUTE AT A GLANCE

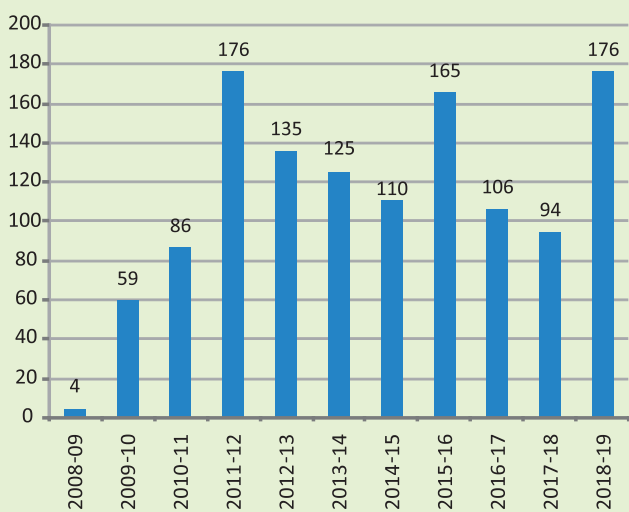
Year wise Ph.D results declared (Total: 1363)



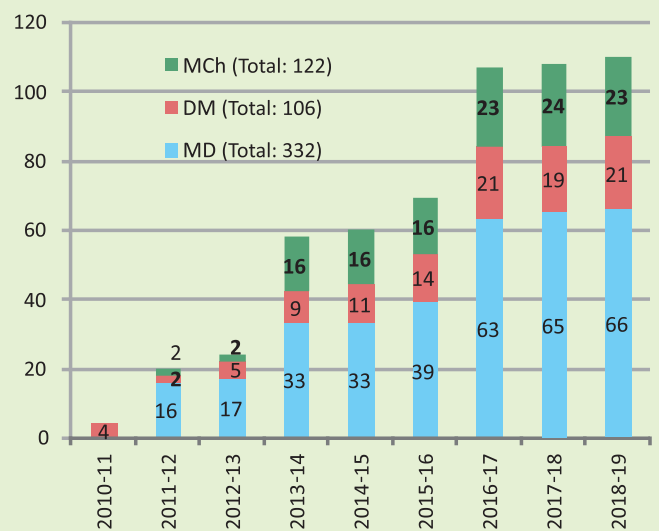
Discipline wise distribution of Ph.D results declared (Total: 1363)



Year wise M.Tech results declared (Total: 1236)



Year wise MD/DM/MCh results declared





INSTITUTE AT A GLANCE

Students graduated in academic year 2018-19 is as under:

Degree \ Cls/OCC	BARC	IGCAR	RRCAT	VECC	SINP	IPR	IoP	HRI	TMC	IMSc	NISER	Grand Total
Ph.D	75	30	16	10	13	8	10	15	11	16	27	231
DM									21			21
M.Ch									23			23
Fellowship Programme									7			7
M.D	1								65			66
M.Tech	151	15	4			6						176
M.Sc (Engg)	6	15		1		6						28
M.Sc.								5		3		8
Integrated M.Sc.											55	55
M.Sc. (Clinical Res)									10			10
M.Sc.(Nursing)									5			5
DMRIT	14											14
PGD-FIT									11			11
Total	247	60	20	11	13	20	10	20	153	19	82	655

HBNI Faculty Distribution as on 31st March 2019

	HBNI	BARC	IGCAR	RRCAT	VECC	SINP	IPR	IOP	HRI	TMC	IMSc	NISER	Total
Applied Systems Analysis												6	6
Chemical Sciences	3	130	22	2	1	4	1					21	184
Engineering Sciences	5	58	22	3	5		6						99
Medical & Health Sciences		16								134			150
Life Sciences		58		2		15				20	5	15	115
Mathematical Sciences									11		21	20	52
Physical Sciences		122	45	49	31	63	40	24	19		22	24	439
Total	8	384	89	56	37	82	47	24	30	154	48	86	1045



PATENTS GRANTED TO OUR CIs

- Rama Rao, “A method and System for Non-Intrusive on-line Detection of Turbine Blade Condition” Indian patent number 300828, dated 07-Sep-2018.
- Rachna Dave, Hiren M. Joshi, V.P. Venugopalan, “A wound dressing capable of in-situ NO_x release and a process for manufacturing the same” Indian patent number 300809, dated 06-Sep-2018.
- P. V. A. Padmanabhan, T. K. Thiyagarjan and S. Yugeswaran,” Thermal Plasma process for ‘inflight’ Dissociation of Zircon Mineral” Indian patent number 303530 , dated 27-Nov-2018.
- T. K. Dey, Avishek Pal, R. C. Bindal, P. K. Tewari, “Charged thin flim composite nanofiltration membranes and process of its production” Indian patent number 308260, dated 27-Feb-2019.
- Deepak Sharma, S. Santosh Kumar, Rahul Checker, Raghavendran S. Patwardhan, Sundarrj Jayakumar, Preethi Sasi, Subrata Chattopadhyay and Vikram Gota “A method of adjuvant treatment with Chlorophylin containing therapeutic preparation including for Radioprotection of normal tissues during radiation therapy and kit thereof” USA patent number 10183026, dated 22-Jan-2019.
- A. K. Bhaduri, G. Srinivasan, Baldev Rai and V. Gopal (Gopal & Metzar Tech), “A process for producing Body Centered Cubic (B2) Nickel Aluminide (NiAl) Coating of Controlled Thickness on Nickel-base Alloy Surface” Europe (validated in France) patent number 2217736, dated 27-Mar-2019.
- Vikas Jain, Gidhar Mundra, Satish Chandra Joshi, P.D. Gupta, “A method and device for tuning SCRF Cavity” Europe (validated in France, Germany & Switzerland) patent number 3266285, dated 16-May-2018.
- M.K.Badapanda, “High Voltage DC Power Supply with full range 24 pulsed input and ripple free output for RF Amplifiers” USA patent application number 10027122, dated 17-Jul-2018.
- Sanjay Kher, Smita Chaubey, Jai Kishore, S. M. Oak , “Optical Rare-Earth doped fiber long period grating based ionizing radiation dose Sensor device” USA patent number 10101467, dated 16-Oct-2018.



Faculty Achievements & Accolades *

- Aditi Sen De (2018), HRI, S.S. Bhatnagar Prize in Physical Sciences
- Chandrima Das, (2018), SINP, SwarnaJayanti Fellowship DST, Govt. of India.
- Saket Saurabh, (2018), IMSc, SwarnaJayanti Fellowship DST, Govt. of India.
- A.K. Pati (2019), HRI, J. C. Bose Fellowship, the Department of Science and Technology,
- Subroto Mukherjee, (2018), IPR, Fellow of Indian National Academy of Engineering
- P. R. Vasudeva Rao, (2018), HBNI, Fellow of Indian National Academy of Engineering
- S.M. Yusuf, (2018), BARC, Fellow of Indian Academy of Sciences
- V Ravindran, (2018), IMSc, Fellow of Indian National Science Academy
- P. Sankaran, (2018), IMSc, Fellow of Indian National Science Academy
- B. Mukhopadhyaya (2018), HRI, Fellow of Indian Academy of Sciences
- Munshi Golam Mustafa, (2018), SINP, Fellow of National Academy of Sciences
- Prabhat Mandal (2018), SINP, Fellow of Indian Academy of Sciences
- Dilip K. Maity, (2018), HBNI, Homi Bhabha S&T Award, DAE, Govt. of India
- Y. V. Nancharaiah, (2018), BARC, Homi Bhabha S&T Award, DAE, Govt. of India
- A. K. Tyagi (2018), BARC, CRSI Silver Medal; MRSI CNR Rao Prize in Advanced Materials and National Prize in Solid State and Materials Chemistry
- Sumathi Rao (2018), HRI, Divisional Associate Editor, Physical Review Letters and Fellow of Indian Academy of Sciences.
- Raj Gandhi (2019), HRI, Fellow of Fermilab Neutrino Physics Center.
- Oishee Chakrabarti (2018), SINP, the National Women Bioscientists Award (Young Category), DST, Govt. of India.
- R. Divakar, (2018), IGCAR, Metallurgist of the year Award in Metal Science category, Ministry of Steel, Government of India
- Anita Toppo (2018), IGCAR, Corrosion Awareness Award, NACE International Gateway, India

*(Partial List)



HBNI STUDENTS' ACADEMIC AND RESEARCH ACCOMPLISHMENTS*

- Pramod Kumar Gupta, BARC, delivered Invited Talk at Federation of Clinical Immunology Societies. FOCIS 2018, San Francisco.
- Surojit Ranoo, IGCAR, Material Science Group, 2019 AWSAR-DST for Best Popular Science stories and Certificate of Appreciation” Magnetic nanoparticles hyperthermia- An emerging cancer therapy sans side effects.
- Sithara Vinod, IGCAR, Dr. A.P.J Abdul Kalam-Best Oral Presentation (Best Paper) Award, International Seminar on Advanced Nanomaterials (ISAN-2018), University of Madras.
- Santanu Parida, IGCAR, Distinguished Student Awardee of American Physical Society, 2019; Ovshinsky Student Awardee of American Physical Society (2019).
- Raktima Basu, IGCAR, Distinguished Student Awardee of American Physical Society, Ovshinsky Student Awardee of American Physical Society (2018).
- Madhu Ghanathe, BARC, Nuclear Science and Technology Organization, Best Poster Award, ICMAGMA-2018, NISER, Bhubaneswar; Full Travel Grant to participate in the 10th Annual Asia-Oceania Neutron Scattering Association (AONSA (ANSTO), Sydney, Australia.
- Biswarup Das, BARC, Prof. C.V.K. Baba Award for Best Thesis in “Nuclear Physics” for the year 2018 by Indian Physics Association.
- Ali Akbar Fakhri, RRCAT, conferred the First Prize for Ph. D. Thesis Presentation during 8th DAE-BRNS Indian Particle Accelerator Conference (InPAC-2018), RRCAT, Indore, January 9-12, 2018.
- Usha Chakravarty, RRCAT, was awarded Best Thesis Award of the Indian Laser Association (ILA) at the DAE-BRNS National Laser Symposium (NLS-27) held at RRCAT, Indore, December 3-6, 2018.
- Pragyesh Dixit, NISER, Best Poster Prize at 14th Indo-Australian Biotechnology Conference, ACTREC, Mumbai, October 22-23, 2018.
- M. Vadivel, IGCAR, Best Oral Paper award DST’s National Conference on Nanomaterials, LRG Government Arts College for Women, Tiruppur, January 24-25, 2019
- Sriram Kumar, BARC, ACS Best Oral Prize CEAMCR-2018, BARC-Mumbai; Best Poster Presentation, NSEMD-2018, CSIR-CSMCRI

*(Partial List)

OUTSTANDING DOCTORAL STUDENT AWARDS*

Mathematical Sciences



Dr. Arvind Kumar, HRI

Thesis Title: On Some Problems Involving Nearly Holomorphic Modular Forms and an Estimate for Fourier Coefficients of Hermitian Cusp Forms

Enrollment No : MATH08201204002



Dr. Divyang G Bhimani, HRI

Thesis Title: Modulation Spaces and Nonlinear Evolution Equations

Enrollment No : MATH08201004002

Life Sciences



Dr. Pratik Harishbhai Chandrani, TMC

Thesis Title: Discovery of Potential Therapeutic Targets in Human Cancer : A Functional Genomics Approach

Enrollment No : LIFE09201104003



Dr. Sanjana Negi, BARC

Thesis Title: Molecular studies on NAC transcription factors regulating secondary wall deposition and abiotic stress responses in banana

Enrollment No : LIFE01201204007



Dr. R S Patwardhan, BARC

Thesis Title: Amelioration of Ionizing Radiation Induced Cell Death in Lymphocytes by Baicalein

Enrollment No : LIFE01201104004



Dr. Asif Amin Dar, TMC

Thesis Title: Immune dysfunction in oral cancer patients : role of tumor microenvironment

Enrollment No : LIFE09201004005

* All awards are for the period
April 2015-December 2018

OUTSTANDING DOCTORAL STUDENT AWARDS

**Dr. Brindaban Modak, BARC**

Thesis Title: Theoretical Studies on Materials for Hydrogen Energy Applications

Enrollment No: CHEM01201004003

**Dr. Adinarayana Bellamkonda, NISER**

Thesis Title: Contracted and Expanded Porphyrinoids with Polycyclic Aromatic Units: Syntheses, Receptor Properties, Reactivity and Coordination Chemistry

Enrollment No: CHEM11201104009

**Dr. Sankararao Chappa, BARC**

Thesis Title: Functionalized Polymeric Materials Supported Noble Metal Nanoparticles for Catalyzing Inorganic and Organic Redox Reactions

Enrollment No: CHEM01201304032

**Dr. Woormileela Sinha, NISER**

Thesis Title: Synthesis, Structures, Spectroscopic Characterization and Oxidation State Distributions in Metalloporphyrins

Enrollment No: CHEM11201104008

**Dr. Ram Avtar Jat, BARC**

Thesis Title: Investigation of Effects of Ternary Alloying on the Hydrogen Storage Behavior of ZrCo Alloy

Enrollment No: CHEM01201004018

**Dr. Basujit Chatterjee, NISER**

Thesis Title: Catalytic Transformations Based on Pincer and Half-Sandwich Ruthenium Complexes

Enrollment No: CHEM11201104001

OUTSTANDING DOCTORAL STUDENT AWARDS

Physical Sciences



Dr. Debasish Mondal, VECC

Thesis Title: Study of Nuclear Viscosity and Isospin Mixing Utilizing Isovector Giant Dipole Resonance

Enrollment No : PHYS04201404004



Dr. Swagata Mallik, VECC

Thesis Title: Statistical and Dynamical Model Studies of Nuclear Multifragmentation Reactions at Intermediate Energies

Enrollment No : PHYS04201204002



Dr. Sivadasan A K, IGCAR

Thesis Title: Optical Properties of AlGaN Nanostructures

Enrollment No : PHYS02201204003



Dr. Subrata Ghosh, IGCAR

Thesis Title: Vertical Graphene Nanosheets : Growth, Structure and Electrochemical Performance

Enrollment No : PHYS02201104005



Dr. Himal Bhatt, BARC

Thesis Title: Infrared Spectroscopy of Molecular Solids under Extreme Conditions

Enrollment No : PHYS01201004004



Dr. Swamidas V. Jamema, TMC

Thesis Title: Dosimetric studies in Image Guided Adaptive Brachytherapy in Gynecological Cancers

Enrollment No : HLTH09201104003

Medical & Health Sciences

OUTSTANDING DOCTORAL STUDENT AWARDS



Dr. Somesh V. Tewari, BARC

Thesis Title: Study of surface flashover of insulator in gases at high pressure

Enrollment No : ENGG01201004004



Dr. Vikas Kumar, IGCAR

Thesis Title: Development of Weld Pattern Analyzer for Quality Analysis of Arc Welding Process

Enrollment No : ENGG02201304015



Dr. Bhaskar Paul, BARC

Thesis Title: Synthesis, characterization and oxidation of Mo-W and Mo-Cr-Si alloys

Enrollment No : ENGG01200904033

OUTSTANDING M.Tech STUDENT AWARDS



Ms. Bharti Hariramani, BARC

M.Tech. Project: To study the effect of constants in the software oriented stream ciphers SALSA and CHACHA

Enrollment No :
ENGG01201501039



Shri B. Aashranth, BARC

M.Tech. Project: Microstructural Evolution in IFAC-1 during Hot Upsetting over a Wide Range of Strain Rates

Enrollment No :
ENGG01201301105



Ms. Shobhna Mishra, IGCAR

M.Tech. Project: Study of Electromagnetic expansion welding of Aluminum alloy tube to Aluminum alloy flange at different energy levels and weld characterization

Enrollment No :
ENGG02201401011



Shri T. Suresh Kumar, IGCAR

Thesis Title: Isothermal low cycle fatigue evaluation of 316 LN austenitic stainless steel weld joint in aged and unaged conditions

Enrollment No :
ENGG02201405018

OUTSTANDING M.Sc.(Engg.) STUDENT AWARD

OUTSTANDING DM/MCh STUDENT AWARDS



Dr. Ashay Pramod Karpe, DM, TMC

Specialization: Medical Oncology

Enrollment No : HLTH09201210014



Dr. Vasudeva Bhat K., DM, TMC

Specialization: Paediatric Oncology

Enrollment No : HLTH09201410018



Dr. Kalasekhar V. S., DM, TMC

Specialization: Paediatric Oncology

Enrollment No : HLTH09201510034



Dr. Richa Vaish, MCh, TMC

Specialization: Head & Neck Surgery

Enrollment No : HLTH09201310038

OUTSTANDING MD STUDENT AWARDS



Dr. Akash Pramod Sali, TMC

Specialization: Pathology

Enrollment No : HLTH09201209029



Dr. Nidhi Sharma, TMC

Specialization: Immuno-Haematology & Blood Transfusion

Enrollment No : HLTH09201309045



Dr. Anisha Appa Navkudkar, TMC

Specialization: Immuno-Haematology & Blood Transfusion

Enrollment No : HLTH09201409051



Dr. Jhanvi Surender Bajaj, TMC

Specialization: Anaesthesiology

Enrollment No : HLTH09201509003



News and Events

Conferences and Seminars



7th Interdisciplinary Symposium on Materials Chemistry (ISMC-2018), organised by BARC, Mumbai, December 4-8, 2018



63rd DAE Solid State Physics Symposium at Guru Jambheshwar University of Sci. & Tech., organised by BARC, Hisar, Haryana, December 18-22, 2018



14th Biennial DAE-BRNS Symposium on Nuclear and Radiochemistry (NUCAR-2019), organised by BARC, Mumbai, January 15-19, 2019



News and Events

Conferences and Seminars



Theme Meeting commemorating “International Year of the Periodic Table” (IYPT-2019), organised by HBNI & BARC, Mumbai, February 16, 2019



A theme meeting to commemorate the 125th Birth year of S.N. Bose and Meghnad Saha, organised by HBNI & BARC, Mumbai, September 10, 2018



The 54th Meghnad Saha Memorial Lecture on the theme “Fifty Years of Cancer Research: Then and Now”, was delivered by Prof. Harold Eliot Varmus, Nobel Laureate, SINP, November 12, 2018



125th Birth Anniversary Celebrations of Prof. Meghnad Saha, SINP, October 6, 2018



News and Events

Conferences and Seminars



27th IAEA Fusion Energy Conference (FEC-2018), organised by IPR, October 22-27, 2018



International Meeting on High Energy Physics (IMHEP), organised by IoP, January 17-22, 2019



DAE-BRNS Workshop on Laser Additive Manufacturing and Allied Technologies (LAMAT-2k18), organised by RRCAT, October 8-12, 2018

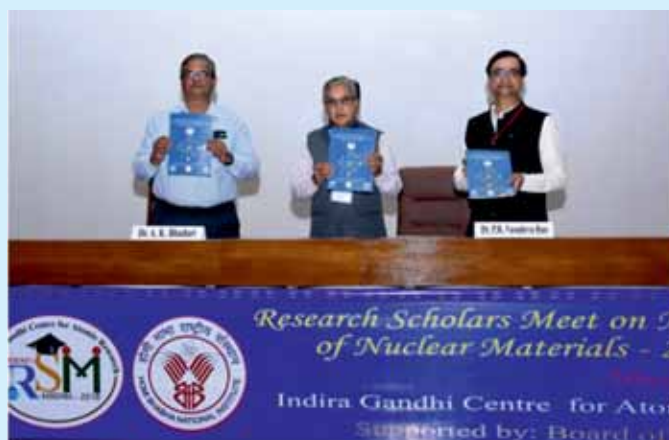


News and Events

Students' Programs



TMC Graduation Ceremony, March 12, 2019



Research Scholars Meet on Materials Science and Engineering of Nuclear Materials (RSM-MSENM-2018), organised by IGCAR, May 7-9, 2018



14th National Research Scholars Meet, organised by TMC-ACTREC, December 3-4, 2018



Open Day TMC- ACTREC



Cleanliness drive at VECC by research fellows, "Swachhata-hi-seva", October 1, 2018



News and Events

Students' Programs



HBNI Research Scholars' Day celebrated at RRCAT, September 28, 2018



Blood donation camp at VECC, January 8, 2019



Session on iThenticate, the web-based plagiarism detection tool at IPR, August 29, 2018



News and Events

Students' Programs



Summer Training in Physics & Chemistry (STIPAC-2018), organised by IGCAR, May 28-July 6 2018



A mini marathon "Beat the Plastic Pollution", organised by RRCAT, October 2, 2018



Book Exhibition at NISER, January, 2019

News and Events

Outreach Programs



UN International Day for Girls and Women in Science, organised by IMSc, February 11, 2019



Science at the Sabha, organised by IMSC, February 24, 2019



Summer Outreach Program in Mathematics, organised by NISER, June 18-30, 2018

4th IPR-NCSTC training programme, scientific outreach series, “Awareness-Cum-Training Programme On Plasma Science & Technology and Energy from Nuclear Fusion”, IPR, Gandhinagar, June 21-22, 2018





News and Events

HBNI Central Office News

Republic Day Celebration



Independence Day Celebration





News and Events



National Science Day

HBNI celebrated the National Science Day on 28th February 2019. Around 80 members from HBNI Central office and HRDD/ BARC participated in the meeting. Vice Chancellor, Prof. Vasudeva Rao provided the background of the National Science Day. Prof. Saibal Basu, Raja Ramanna Fellow and Associate Dean, HBNI spoke on the communication tools and technology that began from the early days. His talk focussed on “Science for all without boundaries”. Mr. Gigi Joseph, the Chief Information Security Officer of BARC delivered a lecture on “Cyber Security Challenges for the Next Generation Communication Systems”.



Hindi Divas celebrations, September 14, 2018



Lecture of Prof. B.S. Tomar to NISER students during their visit to HBNI central office, February 18, 2019



News and Events



International Yoga Day

HBNI in association with BARC organized a 1-day camp on 21st June 2018. The event was attended by more than 50 students, who were given orientation on the importance of yoga. Three hour training session on basic yoga asanas were imparted to the students.



Special lecture on Gender Sensitization by Prof. Jaya Mathew from K J Somaiya Institute of Management Studies and Research, Mumbai, organised by HBNI & BARC, July 10, 2018



Tree Plantation on The World Environment Day at BARC, June 9, 2018



News and Events



An MoU was signed on 7th March 2019 with J.B.Joshi Research Foundation to create an endowment for organising special lectures and instituting awards for innovation



26th CoM Meeting, December 5, 2018



19th Academic Council Meeting, April 7, 2018



Meeting of Standing Committee of Deans, ACTREC, TMC, January 18, 2019



Prof. P.D. Naik took over as Dean, HBNI, March 1, 2019

“तू ही तो थी वो गुड़िया”

देखा था जब शांत सा मन लिए,
बैठी थी जो पेड़ की ओट लिए ।
चकोर सी आँखों से जो निहार रही थी,
शायद वो किसी की बात देख रही थी ॥
मिली थी मुझे एक शांत सी गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

अल्हड़, अबोध, नाजूक थी,
जिसके कृत्य की कृति भावुक थी ।
यादों के समंदर में जो डूब गई गुड़िया ,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

चाँद सा चेहरा , मुकुंद जैसी मुस्कान ,
अिष्ट देह ने मानो, किया था सुरा का पान ।
बिछड़ती सी नज़र आ रही है गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

समझा हूँ तेरे से प्यार का मतलब ,
बजा था पंचजन्य, जब तूने खोले थे लब ।
दोस्त को दोस्ती का पाठ पढ़ा गई ,
फूल भँवरे का मेल बता गई ॥
हर वक्रत, हर क्षण सताती है मुझे गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

सोच रहा हूँ, लिख रहा हूँ ,
कुंठित रुदित नज़र आ रहा हूँ ।
कैसा रहेगा भावी जीवन, बिना तेरे गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

भ्रमर खेला हो निज उपमन में,
ऐसे तू खेलीं थी निश्चल मन में ।
हँसी तेरी थी जैसे चाँद खिलखिलाया,
तू मिली तो दिल ने दिल को बहलाया ॥
नन्हें को मिली इतनी अच्छी गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

ज़िंदगी का अन्दाज़ सिखा गई,
मुस्काना भी, और रोना भी सिखा गई ।
गगन में तारों की तरह ध्रुवित हो उठी,
हर दिन, हर एक नई किस्सों की कहानी गढ़ी ॥
शांत सी, सभ्य सी, मन बहला गई गुड़िया ।
कौन थी वो, तू ही तो थी वो गुड़िया ॥

यादों के बगीचे में टहलती है,
सपनों में नित्य मिलती है ।
ना जाने क्यूँ इतनी करीब आ गई,
रुबानी का अन्दाज़ जो पा गई ॥
कितनी खास हो गई है ये गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

प्रलोभन छोड़ दोस्ती का पाठ पढ़ा गई,
बिना पिये भी सुरा का पान करा गई ।
'सुरेन्द्र' के मन को भा गई वो गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

जाना है फिर तुझसे बिछड़कर,
राहगीर है मिलना होगा फिर किसी राह पर ।
सोचना होगा फिर किसी वक्रत पर मिलेगी,
साथ बिताए पलों की ये कली खिलेगी,
भावुक होकर रुदन मत करना गुड़िया,
कौन थी वो, तू ही तो थी वो गुड़िया ॥

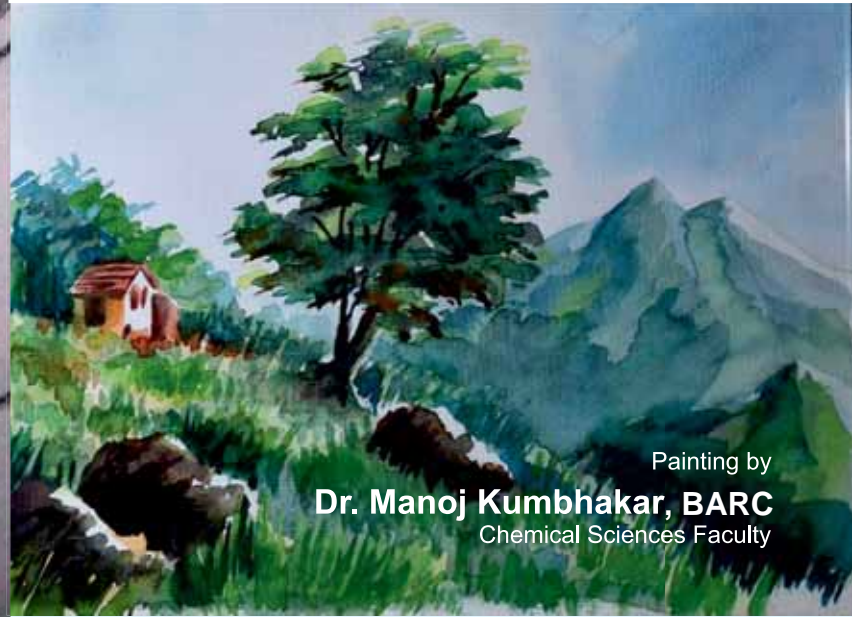
सुरेन्द्र कुमार,
बीएआरसी छात्र



Sketched by
Teena Mouni
Research Fellow, IGCAR



Sketched by
Raktima Basu
Research Fellow, IGCAR



Painting by
Dr. Manoj Kumbhakar, BARC
Chemical Sciences Faculty



Prof. Surendra Prasad, Emeritus Professor, IIT Delhi & Chairman, NBA “On Doctoral Education: Mentoring Scholars for the 21st Century”, June 11, 2018



Dr. M.S. Ananth, Emeritus Research Fellow, IIT Madras “The Idea of a University”, August 20, 2018

HBNI Technical Lectures



Dr. A.N. Nandakumar, Former Head, RSD/AERB “Safety in transport of radioactive materials”, May 10 2018



Prof. Y.S. Mayya, IIT Bombay, “Aerosol science for nuclear reactor safety”, July 5, 2018



Dr. G. Vaidyanathan, Former Director, FRTG, IGCAR “History of accidents in nuclear power plants and radiation facilities”, August 23-24, 2018



Dr. D.J. Biswas, “Lasers, Butterfly Effect and Secure Communication”, December 12, 2018

MISSION

- To encourage pursuit of excellence in sciences (including Engineering Sciences) and mathematics in a manner that has major significance for the progress of indigenous nuclear technology capability.

GUIDING VALUES

- Always adhere to the highest ethical standards.
- Place the good of students first.
- Value excellence in research and foster innovation and creativity.
- Recognize importance of science for the development of the society.

VISION

- To provide an academic framework for integrating basic research with technology development.
- To encourage inter-disciplinary research.
- To nurture an environment for attracting high quality manpower in the sciences including engineering sciences to take up a career in nuclear science, technology and related areas.

OBJECTIVES

- The Institutional structure is designed to meet the overall intended objectives and being the distributed structure with the unitary system, all key members of the CIs/ OCC and faculty are represented fairly across various bodies of the Institute.

NIRF Ranking

HBNI is regularly participating in India Ranking by National Institutional Ranking Framework (NIRF) since its inception in 2015. NIRF outlines a methodology to rank institutions across the country based on various parameters. These parameters broadly cover Teaching, Learning and Resources (TLR), Research and Professional Practice (RP), Graduation Outcomes (GO), Outreach and Inclusivity (OI) and Perception (PR). In last four years, HBNI has been consistently performing well.





HRI



VECC



RRCAT



IPR



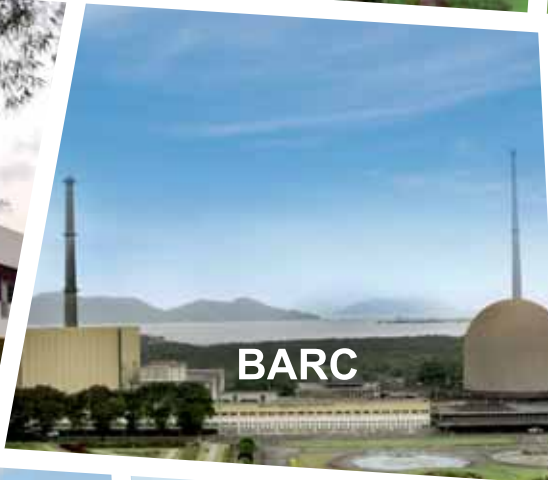
HBNI



SINP



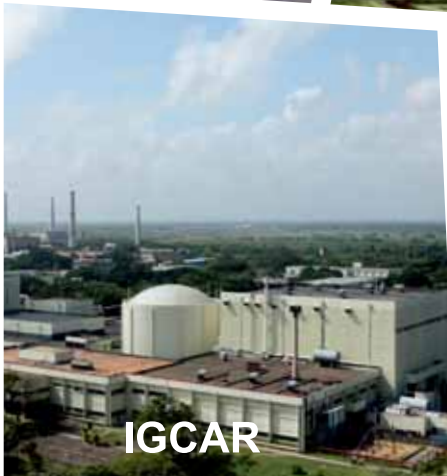
IoP



BARC



TMC



IGCAR



NISER



IMSc

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