

N.4: HBNI Scholar's Day celebrated at RRCAT

At present, there are about 100 research scholars (internal and external) registered under Ph.D. program of HBNI at RRCAT. To have a better interaction among the students and the faculty members as well as to know the talents of the scholars, the idea of *HBNI Scholar's Day* celebration was initiated. This program is organised by Ph.D. scholars independently under the guidance of Director, RRCAT and HBNI-RRCAT officials. Continuing the same enriched tradition, this year HBNI Scholars' Day was celebrated on 30th September 2016. The celebration was inaugurated by Dr. P. D. Gupta, Vice-chancellor HBNI and presided by Dr. P. A. Naik, Director RRCAT. In his inaugural speech, Dr. Gupta reiterated the reason for celebrating HBNI Scholars' Day and appreciated the efforts at HBNI-RRCAT. The celebration had two parts: scientific session and cultural evening. In scientific session, Dr. A. K. Sinha, then Director, UGC-DAE Consortium for Scientific Research, Indore was invited to deliver a talk on "Matter energy and their interaction-A nuclear physics perspective". The talk presented a brief overview of the global research efforts and present understanding about matter-energy and their interaction. This was followed by the poster exhibition session by Ph.D. scholars presenting their work. The poster exhibition brought an opportunity for Ph.D. scholars to present the work among the scientific community at RRCAT. It allowed a wide interaction among the RRCAT scientists and scholars. It also promoted the research opportunity in other labs of RRCAT by the scholars due to the interaction with scientists.



Scholars staging comedy drama "Baap re Baap" during HBNI Scholar Day

The cultural evening was a bouquet with colourful dance, melodious songs and dramas. A short drama presenting the historical events from Indus valley civilization to freedom struggle was staged to commemorate the seventy years of freedom. A couple of classical and bollywood dances and songs made the cultural session live. A comedy drama titled, "Baap re baap" written by Shri K. P. Saxena, highlighting the hardships of the common man was also staged. The drama showcased how an individual was compelled to do undesired

things due to "unemployment". The efforts by Ph.D. scholars demonstrated that they are doing equally good in academics and extra-curricular activities and it was well appreciated by all. The HBNI scholars' day was concluded with the National Anthem.

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N.5: HBNI organizes a mini-marathon "Freedom-70" at RRCAT

India entered 70th year of her Independence on 15th August 2016. University Grant Commissioning (UGC) notified that all the Educational Institutions/Universities should celebrate the Freedom-70 by organising through various events including freedom run. HBNI, RRCAT organised successfully a mini marathon on 24th September 2016 in RRCAT premises.



Participants of mini-marathon "Freedom-70" with Dr. P. D. Gupta, Vice-chancellor HBNI and Dr. P. A. Naik, Director RRCAT

Dr. P D Gupta, Vice-chancellor HBNI was the Chief Guest of the event and it was presided by Dr. P. A. Naik, Director RRCAT. In his inaugural speech, Dr. Gupta welcome the efforts of HBNI-RRCAT in bringing together Ph.D. & M.Tech. scholars, RRCAT employees and CISF personnel. Subsequently, he flagged off the race from BARC Training School at RRCAT. There were 138 participants with 17 CISF personnel, 55 Ph.D. & M.Tech. scholars and 66 RRCAT employees. The prizes were given away in four different categories: CISF personnel, Boys, Girls and RRCAT employee. The names of winner in each category were – Mr. Muthaiya P., CT/GD and Mr. Prabhu B. Rachniakar, CT/GD in CISF category, Mr. Sachin V. in Boys category, Ms. Kritika Bharadwaj in Girls category and Mr. Prabhat Kumar in RRCAT employee category. These prizes were distributed during HBNI Scholar's day.

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N.3: DAE-BRNS Workshop: SCRFWS-2017

A workshop on "Technology Development of Superconducting Radio Frequency Cavities (SCRFWS-2017)", supported by Board of Research in Nuclear Sciences (BRNS), DAE and Indian Society for Particle Accelerator (ISPA), was organized at Raja Ramanna Centre for Advanced Technology, Indore during 18 - 21 July, 2017.

The Guest of Honour for inaugural function of the workshop was Dr. P. A. Naik, Director, RRCAT. Shri S. C. Joshi, OS & Head, PLSCD, RRCAT and Chairman of the Workshop delivered the inaugural talk on "Superconducting RF Cavity Development at RRCAT". Shri Mahendra Lad, Head, RFSD and Secretary of the Workshop welcomed the invitees and participants.

Total of around 100 participants from various research institutes including BARC, VECC, RRCAT and IUAC attended the workshop.

The workshop covered various aspects of science and technology involved in development of SCRF cavities. Around 19 invited talks in the areas of pulsed and CW proton linac physics design, SCRF cavities materials science, low beta and high beta SCRF cavities mechanical design, fabrication, dressing, processing and testing at 2K, 325 MHz and 650 MHz, SCRF systems, cryogenics etc. were given by experts from different institutes. During the workshop, visits to SCRF cavity fabrication and processing facility, cryogenics and VTS facilities were arranged for the participants. In the concluding session, certificates were distributed to the participants.

The workshop was very useful, informative and interactive for researchers working in SCRF cavities related activity.



Participating delegates with organizers of SCRFWS-2017.

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N.4: HBNI Scholars' Day celebrated at RRCAT

At present, there are about 100 research scholars (internal and external) registered under Ph. D. program of HBNI at RRCAT. HBNI Scholars' Day is celebrated to have a better interaction among the students and the faculty members as well as to know the talents of the scholars. This year the program was organised by the scholars on 24th November 2017 under the guidance of HBNI-RRCAT officials and the Director, RRCAT. The celebration had two parts: scientific session and cultural evening. In scientific session, Dr. D. D. Bhawalkar, Founder Director, RRCAT, Indore was invited to deliver a talk on "Challenges in Indian Science and Technology". The talk presented a brief overview of the various R & D projects undertaken by the Department of Atomic Energy in the area of lasers and accelerators. He shared his experience and advised the younger generation to strive to transform our country into a developed nation. This was followed by a poster session by the Ph. D. scholars to present their recent work. It provided an opportunity to the Ph. D. scholars for an active interaction with the scientific community of RRCAT. It helped the scholars to explore avenues for collaborative work with other groups.



Dr. P. A. Naik, Director, RRCAT welcoming Dr. D. D. Bhawalkar, Founder Director, RRCAT.

The cultural evening was a bouquet of colourful dance performances, melodious songs and a drama. It included dance drama *Shiv Tandav Stotra*, a Rajasthani dance *Ghoomar*, and a contemporary dance *Newtons laws of Karma*. Finally, a comedy drama titled, *Til kaa Taad*, written by Shri Shankar Shesh was staged. It showcased the hardship of the common man to get a rented accommodation. The efforts by Ph. D. scholars demonstrated that they are doing equally good in academics and extra-curricular activities and it was appreciated by all. The HBNI scholars' day was concluded with the National Anthem.

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N.5: HBNI organizes a mini-marathon “Rivers - Lifeline of India” at RRCAT

HBNI, RRCAT organised a mini-marathon on 17th September, 2017 in RRCAT premises. The theme of mini-marathon was “Rivers – Lifeline of India” to sensitize the Ph. D. scholars, project trainees, CISF personnel, RRCAT employees and their dependents about the conservation of rivers in India.



Participants of mini-marathon “Rivers – Lifeline of India” with Dr. P. A. Naik, Director, RRCAT along with Dr. S. M. Oak and Shri H. S. Vora.

Dr. S. M. Oak, Former Head, Solid State Laser Division, RRCAT was the Chief Guest and Shri H. S. Vora, Former Head, Laser Electronics Support Division, RRCAT was the Guest of Honour for the event. The event was presided by Dr. P. A. Naik, Director, RRCAT. In his inaugural speech, Dr. Oak reiterated the importance of rivers in our lives and praised the efforts of HBNI-RRCAT in bringing Ph. D. and M. Tech. scholars, CISF security personnel, RRCAT employee and their dependents together on such thematic and important event. This year mini-marathon started from BARC Training School at RRCAT along two routes: longer route for CISF personnel which was flagged off by Dr. Oak and a shorter one for the other participants which was flagged off by Shri Vora.

There were 142 participants including 48 CISF personnel. The prizes were given away in five different categories: CISF personnel, boys, girls, RRCAT employee and dependents. The names of winner in each category were – Mr. Ram Singh, CT/GD in CISF category, Mr. Rajeev Dutt in boys category, Ms. Rashmi Gangwar in girls category, Mr. Sanjay Kumar in RRCAT employee category and Mr. Anish Kumar Rawat in dependents category. These prizes were distributed during HBNI Scholars' Day.

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N.6: Residential campus of RRCAT bags top position in 'Swachh Survey' by Indore Municipal Corporation (IMC) in 2017

It was indeed a proud moment for RRCAT community when IMC declared this centre's residential area as the cleanest among all residents' associations in the city which itself had been declared as the cleanest city in the country during year 2016-2017. IMC had carried out 'Best among the Best' Swachh Survey in year 2017 for different categories through Quality Council of India (QCI). The results were published on January 01, 2018, in all leading newspapers.



Newspaper coverage of the declaration of the cleanest colony in Indore to RRCAT.

Our centre started clean campus activities in year 2011 by forming an Advisory Committee for Clean and Green Campus (ACCGC) consisting of senior scientists and officials from administration and security. The key to the implementation was larger public participation. So far, eleven such campaigns have been held successfully in the campus. These cleanliness drives receive wide participation from the employees of RRCAT, CISF, their families, and the students and teachers of the campus school (AECS). Apart from this, seven tree plantation programmes were also organized. The greener is the campus, the more are the efforts needed to keep the surroundings clean.

The ACCGC proposed various measures to sustain cleanliness in the campus. These include: i) Banning of polythene carrier bags in the shopping complex of RRCAT; ii) Door-to-door collection of segregated waste; iii) Installation of dustbin at various locations in the colony for collecting dry, wet and e-waste; iv) Disposal of wet waste gainfully by producing bio-gas which is used in guest house kitchen thus reducing the consumption of LPG by about 50%; v) Local needs of the manure is met by the vermi-compost produced

N.4: HBNI Scholars' Day celebrated at RRCAT

RRCAT is a Constituent Institute of HBNI and currently there are about 90 research scholars (staff members and external scholars) enrolled for Ph. D. program of HBNI at RRCAT. To provide an opportunity to the scholars to display their academic and extra-curricular talents, every year HBNI at RRCAT organizes “HBNI Research Scholar's Day”. This year the Day was celebrated on 28th September, 2018. This program was exclusively planned and executed by the Ph. D. scholars under the guidance of HBNI-RRCAT officials and Director, RRCAT. This year's celebration comprised of three functions, namely, Poster Session, Academic Session, and a cultural programme in the evening titled “Spectrum”.

Prof. Manoj K. Harbola, IIT-Kanpur was the Chief Guest. He inaugurated the Poster Session, wherein the scholars got the opportunity to showcase their works and interact with scientific community of RRCAT. This year, posters of each discipline were selected for the Best Poster Award.



Prof. Manoj K. Harbola inaugurating the poster session.

In the Academic Session, the Chief Guest awarded Ph. D. and M. Tech. degrees to the graduating students of session 2017-18. Later, he delivered a talk titled “Bubbles, Soda, Whiskey and Wine”.



Students posing for group photograph with Director and HBNI officials.

The events showed that the students are doing equally good in academics and extra-curricular activities. The HBNI scholars' day concluded with the National Anthem.

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N.5: DAE-BRNS Theme Meeting on Ultrafast Science (UFS-2018)

The "DAE-BRNS Theme Meeting on Ultrafast Science" (UFS-2018), an annual event, was organized this year at RRCAT, Indore during Oct. 22-24, 2018. This series of theme meetings is the only platform in the country which brings together the rapidly growing community of researchers working in ultrafast science and technology. The meeting gets financial support from the Board of Research for Nuclear Sciences (BRNS) and the Indian Society for Radiation and Photochemistry Sciences (ISRAPS). RRCAT has a very strong ultrafast laser research programme since 1989 to build as well as use ultrafast lasers for various applications.

The keynote speaker for the inauguration function, which was held on Oct. 22nd, 2018, was Prof. K. Bhattacharya, IISER, Bhopal. The function was presided over by Dr. P. A. Naik, Director, RRCAT. They inaugurated the technical exhibition after the function. The main topics for the meeting covered the applications of ultrafast techniques in science and technology as well as the fundamental aspects. There were 9 technical sessions including one poster session. Total of around 68 participants from various research institutes including BARC, RRCAT, IITs and IISERs etc. attended the meeting. Each day started with a plenary talk and were delivered by Prof. Narayana Rao, University of Hyderabad, India, Prof. Uwe Bovensiepen, University of Duisburg-Essen, Germany, and Prof. A. K. Kar, Heriot-Watt University, UK. There were 19 invited talks delivered in 8 technical sessions. Technical presentations by industry representatives were also organized.



Dr. P. A. Naik, Director, RRCAT presenting memento to Prof. K. Bhattacharya.

Four best poster awards consisting of cash prize and a certificate were distributed during the Concluding Session. Visit to RRCAT laboratories was also arranged for the delegates after the concluding session.

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'Make in India' and one Industrial Session. A special evening talk by Prof. Sanjeev Dhurandhar from IUCAA, Pune on "The Discovery of Gravitational Waves" was organized.



Dr. V. K. Saraswat visiting the industrial exhibition along with Dr. P. A. Naik.

As a fore runner to the symposium, two short tutorial course, attended by about 50 students, on "Optical Interferometry" and "Laser-matter interaction at the nanoscale", consisting of lectures and hands on demonstrations, were also organized by ILA on December 1-2, 2018.

Dr. P. D. Gupta, former Director, RRCAT, was the Chief Guest of the Concluding Function on 6th December. He addressed the gathering and presented the Best Thesis and Best Poster awards.



Dignitaries interacting during NLS-27.

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N.8: HBNI organized a mini-marathon "Beat the Plastic Pollution" at RRCAT

HBNI RRCAT successfully organised a mini marathon on 2nd October, 2018. Theme of the event was "Beat the Plastic Pollution" with tagline "Either Reuse or Refuse", aimed to bring awareness among the Ph. D. scholars, project trainees, CISF personnel, RRCAT employees and their dependents about the plastic pollution.



Participants of mini-marathon with Chief Guest and Director, RRCAT.

Shri H. S. Vora, Former Head, Laser Electronics Support Division, RRCAT was the Chief Guest. The event was presided by Dr. P. A. Naik, Director, RRCAT. In his speech, Dr. Naik emphasized the threats of plastic pollution in our lives and appreciated the organization of the event. The mini-marathon started from BARC Training School at RRCAT along two routes: longer route for CISF personnel and a shorter one for the other participants, which were flagged off by Shri Vora.



Shri HS Vora flagging-off the mini-marathons.

There were 146 participants including 48 CISF personnel. The prizes were given away in five different categories: CISF personnel, boy-student, girl-student, RRCAT employees and dependents. The winners in each category were: Shri Vibhansu (CISF), Shri Pranshul Kushwaha (students-boy), Ku. Preeti Pokhriyal (students-girl), Shri Amar Kuldeep Lakra (employees) and Shri Akash Guha (dependents).

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