

N.11: Accomplishments of AECS, Indore

Atomic Energy Central School, Indore has been awarded the Dr. Vikram Sarabhai Trophy for the best scholastic performance for academic year 2019-20. For this session, the result of class X and class XII was 100%. In Class XII, 17 students out of 61 secured marks above 90% and in class X, 46 students out of 75 scored above 90% marks. Also, 100% students of class XII passed with first class (Excellence Index - 100) and 96% students of class X passed with first class (Excellence Index - 96). The Quality Index of classes XII and X are respectively 8.37 and 8.77. The toppers in Class X (2020-21) are Satyam Sinoliya & Tamoghno Sinha with 98.2%, Tanishk Viraj Bhangre with 97.8% and Arnav Sharma & Prasansha Kumari with 97.2%. The toppers in class XII (2020-21) are Tanmay Ganguli with 97%, Maithili Mangesh Borage with 96.6% and Nissy Milcia William & Urvi Tiwari with 95.8%.

Eighteen students of class X cleared the state level NTSE 2020-21 and became eligible to appear in national level NTSE. Avirishu Petwal topped the state level with a score of 192/200 followed by Tamoghno Sinha, Satyam Sinoliya, Agamjot Kaur Sandha, Arnav Sharma, Apoorva Barve, Sanjit Satheesan, Prasansha Kumari, Snehal Suhane, Sagun Verma, Joanna Teresa Ittoop, Anushka Garg, Lakshya Mulchandani, Sachin Ghongde, Tanishk Viraj Bhanage, Devangi Varshnay, Aswin Jayaprakash Bhat and Anshul Eskey. Samyak Jain of Class X (2019-20) cleared the National Level of NTSE 2019-20. The result was declared in June 2021.

Tanmay Ganguli cleared the second level of KVPY 2020 in SX stream and has become eligible for scholarship. Satyam Sinoliya and Arnav Sharma of Class X have qualified in Indian Olympiad Qualifier in Mathematics (IOQM 2020) & are eligible to appear for INMO 2021. Bhavika Seervi (Class IV), Chaitanya Sabale (Class IV), Anagha Aneesh (Class VIII) and Ritvika Doohan (Class IX) have secured Certificate of Distinction (85% and above marks) and Nidhi Gupta (Class V), Prarabdhi Nagar (Class VI) and Sachidanand Tiwari (Class VI) have secured Certificate of Merit (70-85% marks) in the the Green Olympiad 2020-21 conducted by CBSE-TERI.

Naisargika Negi, Sachidanand Tiwari and Prarabdhi Nagar of Class VI, Gyanvi Jain & Amrita Rajan of Class VIII, Ayan Saxena & Shreeya Jaiswal of Class IX, Arnav Sharma, Yashi Arora, Satyam Sinoliya & Lakshya Mulchandani of Class X cleared the district level of Vidarthi Vigyan Manthan (VVM) 2020-21. Arnav Sharma of class X participated in State Level Camp (Level-II) Examination of Vidarthi Vigyan Manthan - (VVM) 2020-21 held online on February 21, 2021 and secured First Rank. Vivek Agrawal of Class X secured All India Rank 9 in the Hindi Essay Competition organised by Govt. of India, Dept. of Space, ISRO. Pranshu Upadhyay and Maitreyi Sharma of class IX took part in the Quiz, Painting and Essay competition organized by PCRA, Ministry of Petroleum and Natural Gas. They secured the best school level winner certificate in Quiz. Pranshu Upadhyay has received the best state level entry for his painting. Maitreyi Sharma has received the best state level entry for her painting and essay.

*Reported by:
Chinmoy Basu (aecsprincipal@rrcat.gov.in)*

N.12: Awards and Honours

N.12.1: DAE Excellence in Science, Engineering and Technology Awards 2019

N.12.1.1: Scientific and Technical Excellence Award

1. Dr. Khageswar Sahu, SO/G, Laser Biomedical Applications Division, Laser Group, RRCAT has been conferred the "Scientific and Technical Excellence Award" for the year 2019 for his contribution in "Application of light / lasers for disease diagnosis and disease management". The award carried a cash prize of ₹ 1 Lakh, a citation and a medal.



2. Dr. Vikas Kumar Jain, SO/G, Superconducting Cavities Development Division, Proton Accelerator Group, RRCAT has been conferred the "Scientific and Technical Excellence Award" for the year 2019 for his contribution in "Indigenous design and development of dressed SCRF cavity, tuner system for SCRF cavity and X-link tuner". The award carried a cash prize of ₹ 1 Lakh, a citation and a medal.



N.12.1.2: Young Scientist Award

Dr. Khan Mohammad Khan, SO/E, Laser Biomedical Applications Division, Laser Group, RRCAT has been conferred the "Young Scientist Award" for the year 2019 for his contribution in "Development and use of depth-sensitive optical spectroscopy based techniques for biomedical and societal applications". The award carried a cash prize of ₹ 50000, a citation and a medal.



N.12.1.3: Young Engineer Award

Shri Ankit Tiwari, SOD, Cryomodule Development & Cryoengineering Application Section, Proton Accelerator Group, RRCAT has been conferred the "Young Engineer Award" for the year 2019 for his contribution in "Liquid nitrogen based reefer technology and cryomodule development". The award carried a cash prize of ₹ 50000, a citation and a medal.



N.12.1.4: Meritorious Technical Support Award

1. Shri Rajpal Singh, Foreman/C, Laser Technology Division, Laser Group, RRCAT has been conferred the "Meritorious Technical Support Award" for the year 2019 for his contributions in "Design, fabrication, assembly and testing of laser based tools and fixtures and participation in on-site implementation of laser cutting/welding in highly radioactive environment". The award carries a cash prize of ₹ 20000, a citation and a medal.



2. Shri Kailash Kumar Verma, Foreman/C, Industrial Accelerators Division, Electron Accelerator Group, RRCAT has been conferred the "Meritorious Technical Support Award" for the year 2019 for his contributions in "Assembly of 20 MeV injector microtron in Indus Accelerator Complex, assembly of two 10 MeV, 5 kW linacs and round the clock operation of Indus-1 and Indus-2 as mechanical supervisor". The award carries a cash prize of ₹ 20000, a citation and a medal.



N.12.1.5: Meritorious Service Award

1. Shri M. A. Suresh Kumar Nair, Sr. Pvt. Sec., Director's Office, RRCAT has been conferred the "Meritorious Service Award" for the year 2019 for the "Outstanding services in administrative functioning". The award carried a cash prize of ₹ 20000, a citation and a medal.



2. Shri Suresh Kumar, Dr. Gr. I, Director's Office, RRCAT has been conferred the "Meritorious Service Award" for the year 2019 for the "Outstanding services in driving Director's office vehicle". The award carried a cash prize of ₹ 20000, a citation and a medal.



N.12.1.6: Group Achievement Awards

1. A group comprising of 153 members was conferred the Group Achievement Award for the year 2019 for their excellent team work for successfully accomplishing the activity titled "Commissioning of 9 MeV, 5 kW LINAC-B1 at Agricultural Radiation Processing Facility, Mandi Complex, Indore". The award carried a cash prize, citation and medals. The award was received by the Group Leader, **Shri Jishnu Dwivedi**, SO/H and Head, Industrial Accelerators Division, Electron Accelerator Group, RRCAT.



2. A group comprising of 17 members was conferred the Group Achievement Award for the year 2019 for their excellent team work for successfully accomplishing the activity titled "Development of fiber Bragg grating (FBG) based temperature sensors for radiation environment utilizing in-house developed FBG fabrication facility". The award carried a cash prize, citation and medals. The award was received by the Group Leader, **Dr. Om Prakash**, SO/H and Head, Fibre Grating Lab, Fibre Sensors & Optical Spectroscopy Section, Laser Group, RRCAT.



3. A group comprising of 14 members was conferred the Group Achievement Award for the year 2019 for their excellent team work for successfully accomplishing the activity titled "Development and utilization of carbon contamination removal techniques and setups for cleaning optical elements of synchrotron beamlines". The award carried a cash prize, citation and medals. The award was received by the Group Leader, **Dr. Mohammed Hussein Modi**, SO/H and Head, Soft X-ray Applications Lab, Synchrotrons Utilization Section, Materials Science Group, RRCAT.



N.12.2: Award of Doctor of Philosophy (Ph. D.) Degree

The Homi Bhabha National Institute (HBNI), a Deemed University has awarded Ph. D. Degree to following employee / student of RRCAT:

1. Dr. Arindam Majhi was awarded Doctor of Philosophy in Physical Sciences on the dissertation, titled "Surface/interface studies of thin films and development of ultra short period W/B₄C multilayer mirrors with large layer pairs", which was supervised by Dr. Maheswar Nayak.



2. Dr. Arup Ratan Jana was awarded Doctor of Philosophy in Physical Sciences on the dissertation, titled "Electromagnetic design and beam dynamics studies in elliptic superconducting radiofrequency (SRF) cavities", which was supervised by Dr. Vinit Kumar.



N.12.3: Best Thesis Awards

1. Dr. Subhomoy Haldar, Ph. D. Scholar, Materials Science Section, Materials Group, RRCAT received the Homi Bhabha National Institute "Outstanding Doctoral Student Award-2021" during the Homi Bhabha National Institute Foundation Day celebration event, 2021 held on June 3, 2021. The title of the thesis was "Magneto-optical transport studies on ultra-low disordered semiconductor quantum wells grown by MOVPE". The award carries a certificate and a cash prize of ₹ 25000.



Dr. Haldar also received Best Thesis Award sponsored by the Indian Laser Association (ILA), during 29th DAE-BRNS National Laser Symposium (NLS-29) held at Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), Indore during February 12-15, 2021. The award carries a certificate and a cash prize of ₹ 5000.

2. Dr. Charu Mishra, Ph. D. Scholar, Laser Physics Applications Section, Laser Group, RRCAT received Best Thesis Award sponsored by the Indian Laser Association (ILA), during 29th DAE-BRNS National Laser Symposium (NLS-29) held at Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), Indore during February 12-15, 2021. The title of the thesis was "Studies on electromagnetically induced transparency in ⁸⁷Rb atoms". The award carries a certificate and a cash prize of ₹ 5000.



3. Dr. Surjendu Bikash Dutta, Ph. D. Scholar of Indian Institute of Technology, Indore, who worked under the co-guidance of Prof. Shovan K. Majumder, Head, Laser Biomedical Applications Division, RRCAT, received the Best Thesis Award sponsored by the Indian Laser Association (ILA), during 29th DAE-BRNS National Laser Symposium (NLS-29) held at Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), Indore during February 12-15, 2021. The title of the thesis was "Optical spectroscopy based urine analysis for disease diagnosis". The award carries a certificate and a cash prize of ₹ 5000.



N.12.4: Best Poster / Paper Awards

Five posters of RRCAT received the Best Poster Awards sponsored by the Indian Laser Association (ILA), during 29th DAE-BRNS National Laser Symposium (NLS-29) held at Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), Indore during February 12-15, 2021. The award carries a certificate and a cash prize of ₹ 5000. The details of the posters are given below:

1. Title: Development of control software for cold atom interferometry experiments.
Authors: Ayukt Kumar Pathak, Shradha Tiwari, P. P. Deshpande and Viraj Bhanage



Shri Ayukt Kumar Pathak, SO/F, Laser Electronics & Controls Section, Laser Controls & Instrumentation Division, Laser Group, RRCAT, who presented the poster, received the award.

2. Title: Raman spectroscopy for dissolution testing of paracetamol tablets: an exploratory study
Authors: Vijay Kumar, Rashmi Shrivastava, Jyoti Kumawat, Nitin Kumar, Saurabh Maru and Shovan Kumar Majumder



Shri Vijay Kumar, SO/E, Laser Biophotonics Section, Laser Biomedical Applications Division, Laser Group, RRCAT, who presented the poster, received the award.

3. Title: A compact intensity auto-correlator for ultra-short laser pulse width measurement
Authors: Deepak Daiya, R. K. Patidar, S. W. Amalraj, A. Moorti, M. P. Kamath, Sushil Kumar Sharma, N. S. Benerji, K. S. Bindra



Shri Deepak Daiya, SO/E, High Energy Optics Section, Laser Technology Division, Laser Group, RRCAT, who presented the poster, received the award.

4. Title: Studies on optimization of optical pumping of cold ⁸⁷Rb atoms using Stern-Gerlach (SG) technique
Authors: Vivek Singh, V. B. Tiwari, and S. R. Mishra



Shri Vivek Singh, SO/E, Laser Physics Applications Section, Laser Group, RRCAT, who presented the poster, received the award.

5. Title: Study of laser polarization dependent $J \times B$ acceleration in relativistic ultrashort laser foil interaction
Authors: Tirtha Mandal, V. Arora, A. Moorti, A. Uphadhyay and J. A. Chakera



Shri Tirtha Mandal, SO/D, Advanced Plasma Acceleration Section, Laser Plasma Division, Laser Group, RRCAT, who presented the poster, received the award.

N.12.5: Swachhata Award

RRCAT bagged First Prize under 'Residential Campus' category and consolation prize under 'Central Government Office Premises' category in a competition organized by Central Government Employees Welfare Co-ordination Committee on Swachhata. RRCAT officials of Construction and Services Division, RRCAT administration and Advisory Committee for Clean and Green Campus (ACGC) received the prizes and awards on behalf of RRCAT in a function organized at CGO Complex, Indore on 12th Feb. 2021.



Photographs of the first prize plaque under 'Residential Campus' category (left) and consolation prize plaque under 'Central Government Office Premises' category (right).