## N.4: YSRP-2018 at RRCAT

To make young students, who are pursuing courses in the discipline of science and engineering, aware of the frontline areas of science and technology and also to enthuse them to pursue career in R&D programmes of Department of Atomic Energy, Young Scientist Research Programme (YSRP-2018) was organized at RRCAT during May 14 to July 6, 2018. Under this programme, eleven meritorious students were selected from all over the country to work on variety of projects in different laboratories of RRCAT. They were provided with free accommodation at RRCAT Guest House and paid round-trip train fare by II class sleeper and a stipend of ₹ 2,500 per month. All the student worked on the projects of their choice. During this period the students got an excellent opportunity to work on projects in the frontier areas of science and technology and also got opportunity to interact with experts in the respective fields. Apart from these, four more students selected as IASc-INSA-NASI Summer Research Fellow also carried out their project work under the mentorship of Dr. P. A. Naik, Director, RRCAT. The details of all these students and research projects on which they worked are given below.

At the end of the program every YSRP-2018 participant gave a seminar and also submitted a report on their project work. All the students were given YSRP-2018 participation certificates. The program was successfully organized and completed with the support from volunteers from various divisions/sections/labs, administration, accounts and security of RRCAT.

*Reported by:*
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| YSRP Student | Guide | Title |
|---|---|---|
| Mr. Nithin Jo Verghese, MBCET, APJ Abdul Kalam Tech. Uni., Trivandrum | Dr. Rahul Shukla, SUS, MSG | Study and performance analysis of multi-degree of freedom piezoelectric stage |
| Mr. Sourabh Malviya, Indore Institute of Science and Technology, Indore | Shri Somesh Soni, CNCL, CD, TDSG | System Alerts via SMS |
| Mr. Ajay Bisht, Vellore Institute of Technology, Vellore | Shri Chander Kant, SUS, MSG | IoT based Wireless Alarm Monitoring System |
| Ms. Arya Shrivastava, MANIT, Bhopal | Shri Piyush Saxena, MCIL, LED, LG | ASIC based 8 channel Universal Temperature Transmitter |
| Ms. Shruti Sharma, Indian Institute Of Science, Education & Research, Bhopal | Kum. Shweta Verma, MES, LMPD, MSG | Pulsed laser based synthesis of Ag-ZnO nano-composites for photo-catalytic applications |
| Mr. Arjun R Krishnan, Central University of Tamilnadu, Thiruvarur | Dr. Pradeep Kumar, APS, EAG | Estimations of Touschek beam lifetime in Indus-2 synchrotron radiation source |
| Mr. Abhinav Kumar Singh, Indian Institute of Technology (BHU), Varanasi | Dr. Gurvinderjit Singh, CL, LMS, MSG | Effect of lanthanum doping on dielectric and piezoelectric properties of lead - free (Na0.41K0.09)Bi0.5TiO3 ceramic |
| Mr. P. Gautham, Cochin University of Science and Technology, Cochin | Shri A. Singh and Dr. P. K. Mukhopadhyay, ADPLL, LDIAD, LG | Assembly and characterization of pulsed diode pumped solid state (DPSS) deep blue laser at 456 nm |
| Mr. Ajin Joy, Malaviya National Institute of Technology, Jaipur | Shri Riyasat Husain, APS, EAG | Multi-objective Simulated Annealing Algorithm and its application for Indus-2 Lattice in MATLAB |
| Mr. Gokilan Raja, Alagappa University, Karaikudi | Dr. J. Jayabalan and Ms. Asha Singh, NSL, MSD, MSG | Synthesis and optical characterization of Metal-Semiconductor hybrid nanostructure |
| Ms. R. Veslin, Care Group Institutes, Trichy | Dr. P. Ganesh, MEL, MES, LMPD, MSG | Metallurgical characterization of dissimilar metal joints |
| **IASc-INSA-NASI Summer Research Fellow** | **Guide** | **Title** |
| Ms. T. Nivedya, National Institute of Technology Karnataka, Mangalore | Dr. Pankaj Misra, ONEA, LMPD, MSG | Studies on resistive memory switching in Cu/Ta2O5/Pt devices for nonvolatile memory applications |
| Ms. Krithik Upadhya, Manipal Institute of Technology, Karnataka | Dr. Satya Ram Mishra, LPAS, MSG | Characterization of cold atomic cloud of rubidium atoms in a magneto-optical trap |
| Ms. Seema Dukiya, Central University of Rajasthan, Ajmer, Rajasthan | Dr. Sendhil Raja S., LOIL, ALOD, LG | Design and testing of reference Fabry-Perot etalon for frequency locking of a narrow line-width laser |
| Mr. Shreevathsa C. S., Mangalore University, Mangaluru | Dr. Jogy George, LOIL, ALOD, LG | Characterization of ultra-narrow linewidth NPRO Laser |