

Director's Message



Dear Friends,
Shelley said, **"If winter comes, can spring be far behind?"** And the spring has already arrived. However, even the chill of winter did not dampen the spirit of IIT Ropar. The institute marched forward in the past months at an

unprecedented pace of development. The most important of them was the rapid progress in the construction of our new campus. We are proud to announce that the plan for our new campus has received 5 star rating from the GRIHA council. The new Civil Engineering department has been inaugurated and a number of academic conferences and workshops have been hosted at IIT Ropar. The most prominent of them was a national workshop on robotics titled *PUNJROBOTICS*, 2016

that helped in defining our approach in robotics related activities and research. We have entered into active collaboration with a number of educational and research organizations. The most important of them being *"Consortium of IIT Ropar, IIT Mandi and PGIMER Chandigarh for biomedical research"*. We had a very successful season of placement with more than 80% of our students placed in the most reputed companies, a large number of them being the core manufacturing industries of India.

We celebrated the newly formed student bodies through our annual cultural festival ZEITGEIST 2016, where the talent of our students was on display. We also had the first Sports Day, AAROHAN, celebration at IIT Ropar. IIT Ropar is in a phase of fast growth establishing its own traditions and putting all its resources for emerging as a world class institute. I need co-operation from all of you to make this happen.

Jai Hind!

- Sarit Kumar Das

Zeitgeist - Annual Cultural Fest

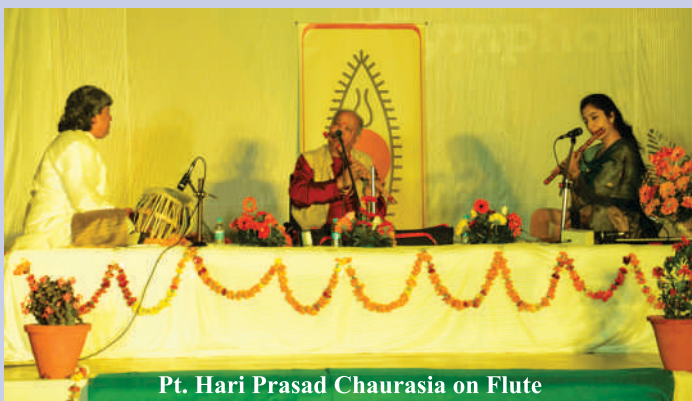
Zeitgeist held between February 18-21, 2016 witnessed many students from more than 50 institutes. It kicked off with a beautiful evening hosted by Spic Macay Chapter, IIT Ropar featuring none other than the flute maestro **Padma Vibhushan Pt. Hari Prasad Chaurasia**, accompanied by Pt. Ram Kumar Mishra on Tabla and Vidushi Debopriya Chatterjee on flute. In true Spic Macay fashion, he not only played beautiful music but also discussed topics surrounding his childhood, his love for music and position of classical taste in today's world, in an interactive session with students and faculty. His lively demeanor and witty humour were no less than a treat, just like the music.

Following such a classy start, were the days of bustling excitement. Over 30 colleges sent more than 300 participants to compete in various events. The band competition - *Torque*, music and dance competitions - *Saaz*, *Symphony* and *Junoon* registered huge participation. To cheer the amazing talent, IIT Ropar registered largest footfall in its history. Just like last year, *Yathartha* - the drama competition and *Nukkad*

Natak gathered huge applause. The street style dance competition - *Smack that*, proved to be a big hit. Sponsored events like *Paint Ball battle*, *Poker night* and *Virtual reality* filled the gaps too well. While gaming, business, literary, arts, music etc. kept students busy during day, nights featured renowned artists performing live. Bollywood singer *Ganjendra Verma* and Punjabi heart throb *Sharry Mann*, brought out the best from the crowd, they were just sensational. Rock bands *Spunk!*, *The Light Ear* and *DJ Aerrero* kept people grooving all night.



Two of the most cheered events of the festival were *Mr. and Ms. Zeitgeist* and *Lashkara*. Anjali Raut was a gracious judge for talented students vying for the title of *Mr. and Ms. Zeitgeist*. *Lashkara* featured different teams putting up Fashion Shows, all trying to be unique and to stand out, while walking and posing effortlessly. They were judged by Femina Miss India and Miss World 2012 finalist Ms. Vanya Mishra and Ms. Anu from Style Virus.



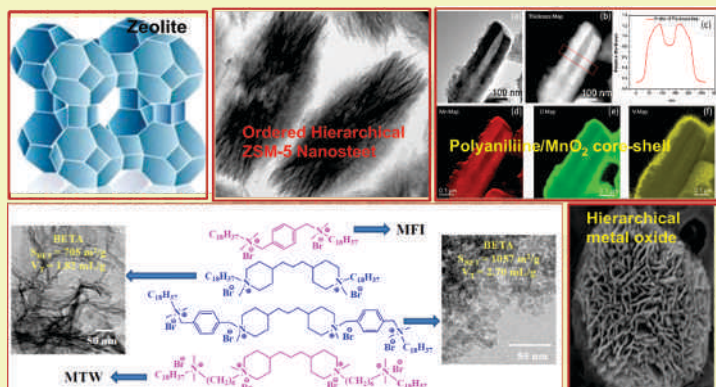
Pt. Hari Prasad Chaurasia on Flute

Know Our Faculty



Dr. Rajendra Srivastava, Department of Chemistry

Design and development of nanoporous materials and ionic liquids for their applications in sustainable chemical synthesis, energy, environment, water purification, and clinical diagnostic is the focused area of my group. We have developed wide range of multi-cationic surfactants for the synthesis of hierarchical/nanocrystalline zeolites of different framework structures. These materials are being developed for the sustainable chemical and petrochemical synthesis that finds wide industrial applications in fine-chemical and petrochemical industry. Our group has demonstrated the unique applications of nanocrystalline zeolites in electrochemical determination of clinically important bio-molecules and inorganic/organic water contaminations. We developed enzymatic and non-enzymatic sensors based on nanocrystalline zeolite for the



electrochemical detection of clinically important bio-molecules, water contaminants such as organophosphates, toxic metal ions (such as As, Hg, Pb, Cd) etc. We have developed multi-functional heterogeneous catalysts based on zeolites for industrially important chemical synthesis. Multi-functional and sulfonic acid functionalized ionic liquids were developed for unique catalytic applications. We are developing novel synthesis strategy for the synthesis of other class of nanoporous materials such as metal oxides and metal organic framework. Overall, the objective of my group is to develop a range of high surface area materials with controlled porosity for their applications in heterogeneous catalysis, electro catalysis, sensors, fuel cells, and renewable fuels.

Achievements & Awards

- Indian Institute of Technology Ropar won FIRST PRIZE in IMTEX FORMING (International Forming Technology Exhibition) organized by Indian Machine Tool Manufacturers' Association (IMTMA) at International Exhibition Centre, Bengaluru from January 21-26, 2016. Over 475 exhibitors from 23 countries participated in IMTEX-2016, with over 500 live machine displays. Over 40 institutions including IIT-Bombay (Mechanical and Metallurgical Dept.), IIT Ropar and PDPM, IITDM Jabalpur exhibited their R&D projects related to forming industries. The team of research scholars Mr. Arshpreet Singh and Mr. Harish Kumar Nirala, working with Dr. Anupam Agrawal, presented their research work titled "Development of advanced deformation machining and incremental forming techniques" in the exhibition.
- Dr. Rakesh Kumar Maurya has been awarded with Young Scientist Award, International Society for Energy,

Aarohan - Institute's Sports Day

Aarohan, the first annual sports day was celebrated at IIT Ropar on February 18, 2016. The Chief Guest for the day was Ex Hockey Olympian, **Arjuna Awardee Shri Surinder Singh Sodhi IPS** (presently IG Punjab Police Patiala). The ceremony started with the welcome of Chief Guest and Prof. S. K. Das, Director IIT



Ropar on the stage followed by welcome speech by Dr. Prabal Benerjee, Associate Dean, Students Affairs. The Chief Guest and Director IIT Ropar shared their experiences on the importance of sports in student life and encouraged students for larger participation in various sports activities.

On this occasion, IIT Ropar invited Football team of IISER Mohali, Basketball team of Chandigarh University and Volleyball team of Youth Welfare Club Ropar to play friendly matches with IIT Ropar sports teams.

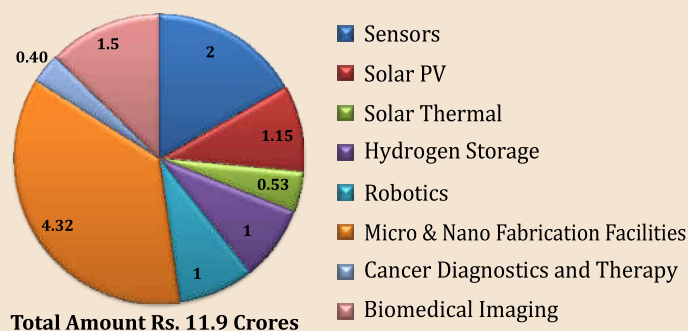
The Chief Guest and Director IIT Ropar, distributed the prizes to the visiting teams and IIT Ropar Inter Year Sports Champions of Athletics, Basketball, Badminton (boys & girls), Chess, Cricket, Football, Table Tennis, Tennis and Volleyball. The ceremony ended with the vote of thanks by Dr. Prabhat Kumar Agnihotri.



Environment and Sustainability, 2015.

- Our ongoing research work on Graphene based Nano-electronics titled "*Performance Improvement in SC-MLG NRs Interconnects Using Interlayer Dielectric Insertion*", has been appeared as a featured article in IEEE Transactions on Emerging Topics in Computing, 2015.
- IIT Ropar's student team consisting of K. Sakthidasan, Naman Goyal and Kaustav Das guided by Dr. Samaresh Bardhan has been adjudged as the best entry in the Regional Round of the Essay Competition "*The RBI Policy Challenge-A National Level Competition*" organized by Reserve Bank of India.

Internal Interdisciplinary Research Allocation



Start-up India Programme

The Indian Institute of Technology Ropar has received a grant of Rs. 5 crores to set up a Technology Business Incubator in Punjab. The grant received will be utilized to contribute towards the Central Government's "Start-Up India Programme". The incubator will foster innovation and entrepreneurship culture in the state over a period of five years. The Incubator will provide various facilities like mentoring, physical office space, library and equipments among other things. Key focus will also be on providing networking and marketing support to all incubatees in order to enable and prepare them to raise capital through angel funding.

IIT Ropar already has an umbrella center, CIBI (Centre for Innovation & Business Incubation) which provides incubation services for technology and knowledge based entrepreneurship. Established in 2013, this center focused on Accelerating Innovation, Business Incubation and Growth of Entrepreneurship at IIT Ropar. The objective of CIBI is to facilitate the conversion of research activity into entrepreneurial ventures. It has received financial assistance from various sources along with the Department of Science & Technology, Government of India.

The Technology Business Incubator (TBI) will be a specialized state-of-the-art facility focused on providing the incubatees unlimited access to the skilled resources in the field of Science and Technology, in order to help them grow. The main objectives of this Incubator will be:

- To promote new technology/knowledge/innovation based startups.
- To build a vibrant startup ecosystem, by establishing a network between academia, financial institutions, industries and other institutions.
- To provide cost effective, value added services to startups like mentoring, legal, financial, technical, intellectual property related services.
- To provide a platform for speedy commercialization of technologies developed by the host institution or by any academic/technical/R&D institution or by an individual.
- To create jobs, wealth and business in alignment with national priorities.

IIT Ropar Participation in National Initiatives

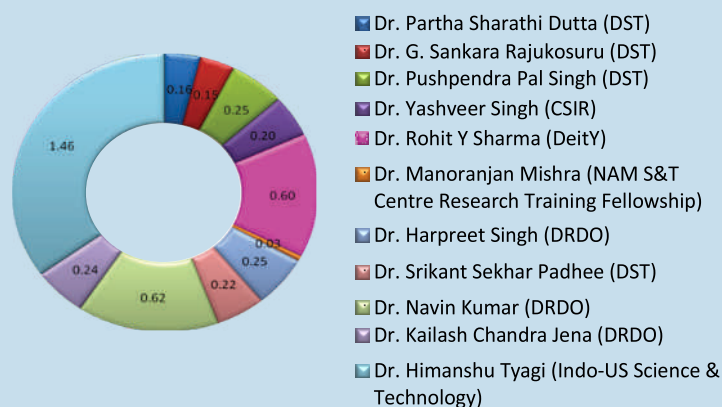
IIT Ropar aggressively promotes interdisciplinary research in areas which are the need of the nation and actively participating in several national initiatives like IMPRINT, Gian, Rashtriya Avishkar Abhiyan, Unnat Bharat Abhiyan just to name a few. Faculty members of institute work closely with research personnel of premier institutes like PGIMER, DRDO-TBRL, CSIR-IMECH, CSIR-CSIO, NIPER etc. In order to promote research, IIT Ropar runs few more PhD programs in addition to the regular one.

The institute promotes research in niche and interdisciplinary areas of renewable and clean energy, sensors, micro and nanofabrication, bio imaging, healthcare, theoretical studies etc. in addition to the conventional areas of science and technology. Interdisciplinary research is also of prime focus in the newly established Centers of Biomedical Engineering and Materials and Energy Engineering.

Additionally, three **GIAN** Courses have been approved by MHRD, Government of India. The details are given below:

Course Name	IIT Ropar Faculty	Overseas Faculty
Surface Engineering	Dr. Harpreet Singh	Prof. Christopher C. Berndt, Swinburne University of Technology Australia Australia
Applied Fatigue and Fracture Mechanics	Dr. Dhiraj Mahajan	Dr. Richard Pettit, United States of America
Bio and Nanotechnology and Biomimetics	Dr. Navin Kumar	Prof Bharat Bhushan, The Ohio State University, United States of America

External Funded Projects / Industrial Consultancy



Total Amount Rs. 4.17 Crores

* Projects awarded from December 1, 2015 to February 29, 2016

PunjRobotics

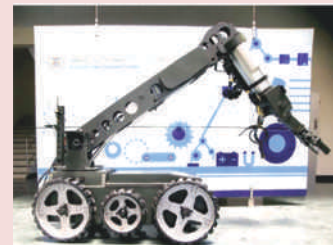
To provide an active interaction and networking forum for the academicians and researchers working in Robotics field in the region around IIT Ropar, a two-day Robotics meet was organized on January 16-17, 2016 by PunjRobotics group, in association with Robotics club, IIT Ropar.



Keeping in view the major application areas for Indian Robotics, five sessions (Medical, Defense and Security, Agriculture, Industrial and Robotics Education) were planned. Expert talks and research work presentations in these areas were the main features of the event. The invited experts who shared their experienced views were - Prof.

Gurvinder Virk (University of Gavle, Sweden), Prof. S. K. Saha (IIT Delhi), Sh. Alok Mukherjee (Head, Robotics Center, DRDO Pune),

Dr. Sanjeev Soni (CSIR Lab, Chandigarh), Dr. Dinesh Pal (DRDO Chandigarh), Dr. Swagat Kumar (TCS, Robotics Division, New Delhi), Prof. P. M. Pathak (IIT Roorkee), Prof. Sandipan Bandhopadhyay (IIT Madras). Issues related to academic, professional and innovation activities in robotics, building on our strengths, linkages to regional, national, and international activities were discussed.



RSI Students' Chapter

The students' chapter of RSI (Robotics Society of India) was inaugurated during PunjRobotics workshop on January 16, 2016. Nearly 50 students have joined the society and have planned annual activities for the upliftment of RSI and the Robotics field, in general.

New Campus

Indian Institute of Technology has been awarded with 5 star rating under green rating for integrated in habitat assessment. It is the



highest National Rating for green buildings. GRIHA rating system consists of 34 criteria categorized under various sections such as Site Selection and Site Planning, Conservation and Efficient Utilization of Resources, Building Operation and Maintenance, and Innovation points. The GRIHA Council team evaluates the optional criteria and estimates the total number of achievable points. All compliance documents will be checked and vetted through the appraisal process as outlined by GRIHA. IIT Ropar scored 600 points against 34 criteria to receive 5 Star GRIHA rating.



BoG Chairperson and Director visit the new campus



Perspective view of the Lecture Hall Complex

Republic Day

The Republic Day was celebrated with the unfurling of the national flag by the Director. In his speech Director mentioned the significance of the day to students and staff. Students, faculty and staff gathered on the occasion and celebrated the day with patriotic fervor. A 'Sadbhavna Daud' was also organised on this occasion.



Lohri

The festival of Lohri was celebrated with the great enthusiasm & energy by the students and residents of IIT Ropar. Students gathered around bonfire and distributed sweets.



New Joinings



Dr. Bibhu Prasad Padhy
Assistant Professor
Electrical Engineering



Dr. J. Kalaiselvi
Visiting Faculty
Electrical Engineering



Dr. Ansu Louis
Assistant Professor
Humanities & Social Sciences



Sh. Gautam Sharma
Assistant Registrar



Ms. Bhawna
Counselor



Sh. Deepak Kumar
Counselor

मातृभाषा दिवस

दिनांक फरवरी 21, 2016 को भा.प्रौ.सं. रोपड़ में मातृभाषा दिवस मनाया गया। इस आयोजन में संस्थान के लगभग 35-40 लोगों ने बढ़चढ़ कर हिस्सा लिया जिसमें संस्थान के विद्यार्थी, संकाय सदस्य एवं कर्मचारिगण बड़ी संख्या में उपस्थित थे। संस्थान में दूर-दूर से आए लोगों को अपनी मातृभाषा के सामाजिक, सांस्कृतिक तथा साहित्यिक सामर्थ्य को अपने साथियों के सामने रखने का एक स्वर्ण अवसर इस कार्यक्रम के द्वारा प्राप्त हुआ। इस कार्यक्रम में श्री शुभम शर्मा, विद्यार्थी, भा.प्रौ.सं.रोपड़ ने संचालन किया। कार्यक्रम में देश के विभिन्न प्रांतों के विद्यार्थीयों, कर्मचारियों ने अपनी-अपनी मातृभाषा में लिखी मौलिक तथा कुछ प्रसिद्ध कविताएँ सुनायी। जिसमें बी. परवीन कुमार, के. शक्तीदासन, ओंकार, लव शिंदे, विकास सिंह हांडा, अंबुज गोयल, ईशान जाजु, शुभम शर्मा, देवदत्त, देवनाथ कुमार, प्रवीर कुमार, अक्षय कुमार, गिरीश प्रमोदराव कठाणे, कौशल किशोर झा इत्यादियों ने अपनी अपनी मातृभाषा में कविताएँ, नाटक प्रस्तुत किये। शक्तीदासन ने तेलुगु, देवनाथ ने भोजपुरी, प्रवीर कुमार ने हिंदी, शुभम शर्मा ने हिमाचली में कविताएँ सुनायी।