



## Director's Message



Dear Friends,  
My heartiest wishes on the occasion of our 70<sup>th</sup> Independence Day. This day reminds us of the supreme sacrifice made by our martyrs to bring independence to our country and the tremendous responsibilities on our shoulders in building our nation. IIT Ropar would like to share this responsibility by building itself as an institution of excellence and a living monument of modern India.

I am delighted to announce that the Ministry of Human Resource Development has revised the estimated first phase of activities and campus construction to Rs. 1668 crores for IIT Ropar. The Ministry has indicated that this sanction is for the period upto March 31, 2019 by which time the new campus of the institute has to be made fully functional for at least 2500 student strength. IIT Ropar during the last one year time has been gearing up its activities in anticipation of this revision. During this period, we have made remarkable progress in campus construction, infrastructure building and faculty recruitment. As a part of our ambitious plan of recruiting high quality faculty members and building up research collaborations as well as reaching the Indian Diaspora, a delegation of our faculty members and external experts visited United Kingdom, Canada and United States in the month of May-June. During this visit, three MoUs for research collaboration were signed with Cardiff University, Wales, University of Ontario Institute of Technology, Toronto and State University of New York,

Binghamton. The team also visited University of Cambridge, University of California, Los Angeles, Purdue University and MIT Cambridge. Meetings with the Indian Diaspora took place in London, Toronto, Los Angeles and Chicago where an unprecedented enthusiasm was observed among the Non Resident Indians about IIT Ropar. It has been decided to setup a general council of Global Associates of IIT Ropar to mobilize support and funds for the institute. The tour was also successful in recruiting faculty members in the departments of Computer Science, Mechanical and Electrical Engineering based on the interviews held in London, Toronto and Chicago. As a result of this, IIT Ropar today has for the first time crossed the sanctioned faculty strength. This brings us to a growth of 50% within 18 months of time. In view of our projected three fold growth in student strength during the coming three academic years, we would like to continue this trend to hire on an average 40 high quality faculty members every year. As a consequence of our growth and academic standing, we have seen a quantum jump in the JEE ranks in various departments during the current admissions season. We have also seen a threefold increase in the area of externally funded projects. Recently, the faculty members of IIT Ropar participated in a two day Research Retreat where research strategies along with areas of focus were discussed in a series of intense meetings.

Friends, IIT Ropar has initiated an unprecedented rate of growth while preserving and improving its core concern for quality in education and research. The untiring efforts of the students, faculty and staff are unfolding newer and newer success stories for the institute.

I invite you all to join these streams of activities and help us in becoming an institute of global standing.

**Jai Hind!**

## Visit of IIT Ropar Delegation

An academic delegation of IIT Ropar, led by Prof. S.K. Das, Director, visited UK, US, Canada during May 23 - June 10, 2016. The other members of the delegate included: Prof. Manohar Lal Munjal, INSA Senior Scientist, Department of Mechanical Engineering, Indian Institute of Science, Bengaluru and Senior Senator of IIT Ropar; Prof. S. S. Murthy, IIT Delhi (Retd.) and Distinguished Professor, CPRI, Bengaluru; Dr. Harpreet Singh, Associate-Dean (International Affairs) and Associate Professor, Department of Mechanical Engineering; Dr. Nitin Auluck, Head, IT Centre and Associate Professor, Computer Science and Engineering; Dr. Rohit Y. Sharma, Associate Professor, Department of Electrical Engineering, IIT Ropar.

Major Objectives of the tour were to interact with International Universities for Research and Academic Collaborations, to

conduct Off-shore Faculty Interviews and Interact with Indian Diaspora in the form of NRI Meets. During this tour, 8 Universities were visited namely: Cardiff University, UK;

University Of Cambridge, UK; McMaster University, Canada; University Of Ontario Institute Of Technology (UOIT), UK;



Dr. Sarit K. Das, Director, IIT Ropar signed MoU for research collaboration with the VC of Cardiff University, UK.

University of California, Los Angeles, US; Purdue University, US; State University of New York, Binghamton, US; MIT, US. MoUs were signed with three Universities namely: Cardiff University, UK; University of Ontario Institute of Technology, Canada; State University of New York, Binghamton, USA. The objective of these MoUs is to conduct joint research, student and faculty exchange and to organize joint academic and research activities. Common research areas have been identified with these universities, which will be nurtured by the domain leaders from the involved Institutions. The following research areas have been selected for the future collaboration with the visited universities:

- Biotechnology, Biomedical Engineering and sensors
- Water technology and management.
- Energy- smart grids, micro-grids, renewable energy interface with emphasis on energisation of communities.
- Information and communication technology, big data
- Electronic packaging.

More than 120 NRIs took part in these meets organized in London

(26-05-2016), Toronto (29-05-2016), Los Angeles (04-06-2016) and Chicago (05-06-2016). The Director, Prof. S.K. Das introduced IIT Ropar and presented his vision and mission and its possible contribution to the state in solving some of challenging problems of the State such as conservation of water and soil, early detection of cancer & its remedies and reviving manufacturing sector and skill development, setting up demonstration micro-grids.

During the offshore interviews, six faculty members selected, out of 14 total candidates appeared. First interview was conducted in London on May 24, 2016, In which total six (ME-2, EE-3, CE-1) candidates appeared and two candidates selected (ME-1, EE-1 recommended for department evaluation). Next interview was conducted in Toronto on June 1, 2016, in which total four candidates appeared (CSE-3, CE-1), in which three candidates selected (CSE – 2+1 recommended for department evaluation). Next interview was conducted in Chicago on June 1, 2016. In which total four candidates appeared (ME – 3, EE - 1), out of which three candidates were selected (ME-2, EE - 1).

## Know Our Faculty

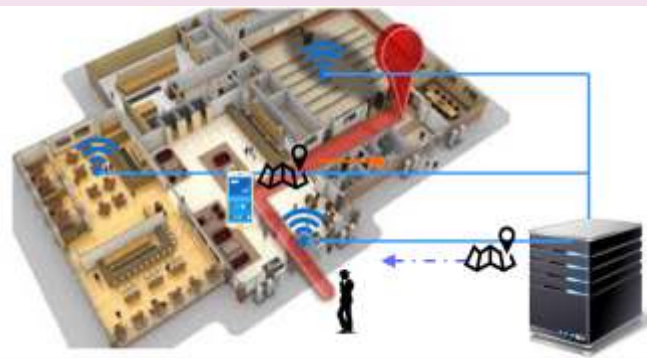
### Dr. Jung Hyun Jun (Peter), Department of Computer Science and Engineering

All my works to date fall into an area of Cyber-Physical System. Specifically, they cover almost all areas of Wireless Sensor Network (WSN): lower layer protocol designing by exploiting channel characteristics, designing and implementing routing protocols for low-duty-cycle WSN, partially controlled node deployment, opportunistic data forwarding in Mobile WSN, radio-based indoor localization, and developing sensor-enabled applications.



My current interest is applying WSN and IoT in the designing of appropriate technologies and applications for developing countries like India. Since the population of India, today is about 1.2 Billion (2nd largest in the world), solving any of one of their local challenges would be equivalent to solving any global issues. In the past two years, I have focused on issues related to developing coding without a computer. The outcome of this is CamCode. It is a pen-and-paper based coding where compilation and running of the code will be done by analyzing an image of code taken with any digital cameras. My another research focus is in designing an affordable indoor navigation and positioning system. Our solution is to integrate

Wifi fingerprinting with Dead-reckoning based indoor localization to automate radio map generation. Here, users will automatically contribute in generating and updating the radio map by shifting the boundaries based on their WiFi scannings. This will reduce the cost of indoor navigation and make it scalable.



## JEE Ranking & Intake of Students & PhD Scholars

IIT Ropar set a benchmark among the younger IIT's in the recently concluded seat allocation for different undergraduate programmes at IIT's through JEE (Advanced) - 2016. From the inception of IIT Ropar, this is the first time that the opening rank of IIT Ropar is within the top 1000 rank in the open category. Being a younger IIT, this is a big achievement. With vibrant academic environment and an increase in the world class facilities will foster further improvement in the opening and closing rankings in coming years.

IIT Ropar also actively participated in the JEE (Advanced)-2016 duties. To be specific, IIT Ropar acted as one of the reporting centres and the feedback is overwhelming.

The Institute is proud to welcome 51 PhD scholars across all departments and centres. This is the single largest intake of PhD scholars in a single semester, so far.





## Physics Day

The Department of Physics has organized a one-day symposium, Physics Day 2016, on July 22, 2016, as the first edition of this annual event in the Department. This is in the spirit of making a platform for scientific



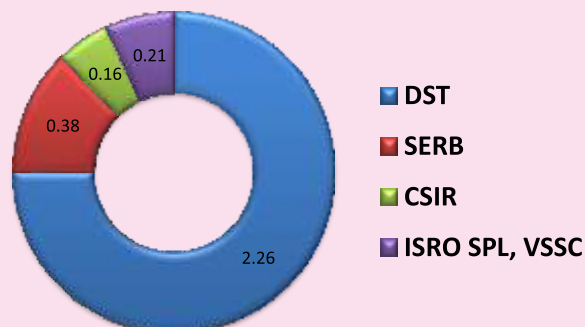
interaction between the various research subgroups in the Department. This would inculcate among the students the motivation towards idea-based research and to remain competitive in the international perspective. Prof. Sarit K. Das, Director, IIT Ropar



had inaugurated the event and said his inspiring words on importance of science-based engineering education. The technical event had started with the Colloquium by Prof. K. Thyagarajan (IIT Delhi), who talked on the generation of entangled photons and its application in quantum information processing using fibre-based integrated system. The next Colloquium by Prof. Soumitra Sengupta (Indian Association for the Cultivation of Science, Kolkata) on gravitational wave awed the audience. The rest of the day was full of oral presentations of the students and the poster session, with enthusiastic participation of the audience.



## External Funded Projects



**Total Amount Sanctioned Rs. 3.01 crores (April - July 2016)**

## Independence Day

Independence Day was celebrated at the institute with patriotic fervour. On the occasion of the Independence Day, Prof. S. K. Das, Director, IIT Ropar unfurled the flag and conveyed his greetings to all. This was followed by the singing of the National Anthem. It was mentioned by the Director in his address that the span of Independence for our country is 70 years, however the country has a cultural heritage which dates back to centuries. We should be proud of the legacy and accomplishments made so far. Our higher and technical education system, CSIR labs, Atomic Energy and Space program are a few prominent examples. Faculty, staff and students thereafter participated in Sadbhavana Daud for social harmony.



## Research Retreat

A research retreat was arranged on July 30-31, 2016 at Kasauli Resorts, Kasauli to discuss about the research thrust areas and focus, policy on research funding, policy on publications and patents and specific issues being faced at IIT Ropar. Around 63 faculty members attended the retreat. It provided an opportunity to



explore deep into both our strengths and weaknesses and helped in deciding the future path of research for the entire institute. It also helped us to better understand ourselves as a group and explore our survival assets. During the retreat, faculty members got an opportunity to see each other in a different environment and uncover a deeper understanding of everyone's diverse personalities and research potentials. The retreat also acted as a precursor for the mission-vision workshop which is already on its way. An intensive group discussion session was organized where faculty members gave several constructive suggestions related to the research mission of our institute.

## Launch of RFID System

RFID system and Online OPAC on public domain has been successfully launched on July 01, 2016 by the Director, Prof. S. K. Das. Director inaugurated the RFID system and launched the system by lending a book through the self-service kiosk with smart card. On this occasion, the web OPAC (Online Catalogue of IIT Ropar) was also opened for public access.



## New Joining



**Prof. Deepak Kashyap**  
Visiting Professor & Head  
Civil Engineering



**Sh. Sanjay Bhatnagar**  
Registrar



**Dr. Brijesh Kumbhani**  
Assistant Professor  
Electrical Engineering



**Dr. Hande Vinayak Gopal**  
Assistant Professor  
Electrical Engineering



**Dr. Naveen James**  
Assistant Professor  
Civil Engineering



**Dr. Mukesh Kumar Saini**  
Assistant Professor  
Computer Science & Engineering



**Dr. Puneet Goyal**  
Assistant Professor  
Computer Science & Engineering



**Dr. Putul Halder**  
Assistant Professor  
Civil Engineering



**Dr. Sam Darshi**  
Assistant Professor  
Electrical Engineering



**Dr. Suman Kumar**  
Assistant Professor  
Electrical Engineering

## हिन्दी कार्यशाला

भा.प्रौ.सं. रोपड़ द्वारा दिनांक जून 6, 2016 को हिन्दी कार्यशाला सह प्रतियोगिता का आयोजन किया गया। इस कार्यशाला में मुख्य अतिथि वक्ता के रूप में डॉ. राकेश कुमार मौर्या, सहायक प्राध्यापक, भा.प्रौ.



सं.रोपड़ विशेष रूप से उपस्थित थे। "जीव चेतना का मानव चेतना में संक्रमण ही विकास है" इस विषय पर डॉ. मौर्या ने बड़े ही सरल एवं रोचकता से अपनी बात रखी। छात्र, संकाय सदस्य, कर्मचारियों ने अपनी-अपनी जिज्ञासाओं को मुख्य अतिथि वक्ता के सामने रखी। इस कार्यशाला में विद्यार्थीयों तथा कर्मचारियों के लिए पृथक रूप से हिंदी कविता प्रतियोगिता भी रखी गयी थी। इस कार्यशाला में सभी ने बड़चड़ कर हिस्सा लिया।



## New Campus

New campus is currently being divided into three Phases: Phase 1-A, 1-B & 1-C and around 50% of Phase 1-A (ongoing construction works) has been completed. Recently, MHRD has sanctioned the revised budget of Rs. 1668 cr. for establishment of IIT Ropar in the Project mode. MHRD has allocated this budget under various headings out of that Rs. 1231 cr is allotted for Civil works with a time deadline of April 01, 2019. As such, the construction work is in full swing under Phase (1-A) and the other Phases (1-B & 1-C).

The current status of the construction work can be seen in photographs of various buildings. It is hoped that the Main Campus will be ready for the accommodation upto 1200 students by July, 2017.



Utility Block



Department of Computer Science & Engg.



T2 Residential Block