

Director's Message



Dear Friends,

Summer has set in and it is time for us to look back at the academic year that is coming to an end. This academic year of 2016-17 has been a happening year for IIT Ropar. First, let me congratulate all our

stakeholders for helping IIT Ropar to be ranked 21st in the Engineering category and 32nd in Overall category in the 2nd NIRF (National Institutional Ranking Framework) ranking mooted by the Ministry of Human Resource and Development. Although, number-wise this is a little lower than the 1st NIRF ranking of 2016, it is a more realistic position in which large number of institutions participated and the ranking criteria was changed helping the older institutions with respect to their experience. Nevertheless, the data shows that IIT Ropar is doing constantly well in teaching-learning and research and also in outreach activities. Probably we couldn't reach well enough to the academic community and public at large inspite of our good performance, which has resulted in a poor perceptional score that needs to be improved.

The major push that we have made in the last one year is in building our infrastructure as a result of which we are in a position to begin moving to our new campus during this summer. During the coming semester, we expect to move about half of our activities to our new campus on the banks of Sutlej. The construction work for the next phase has also started during the last few months.

In keeping with the infrastructure built, we are going to double our B. Tech. intake in the academic year 2017-18. As a consequence of

this and new Masters degree courses in Computer Science, Electrical Engineering and Biomedical Engineering, along with introduction of B. Tech. in Chemical Engineering, our student strength is going to jump to 1200 from current strength of 820. We are also going to introduce our new curriculum, meticulously designed by our faculty members, to produce engineers of 21st century with more hands-on experience, strong fundamentals and sensitive to societal needs.

During this period, we have given a major push in adopting our mission and vision and prepare a strategic plan for that. I hope to bring it up to you in the next issue of Prajwalam. We have given a big push to faculty recruitment and I am happy to inform you that IIT Ropar faculty strength stands at 115 today which is an increase of about 80% over the last two years. We have taken extra-ordinary steps for this to happen. During the last month, a team visited Australia and Singapore to conduct recruitment internationally and forge research collaboration with the leading universities in that region. Research being the focus of IIT Ropar, we have constantly improved in research publications and patenting not just in numbers but in its quality as well. We want to make IIT Ropar an exciting place for our students. Towards this, we had our first technical fest ADVITIYA followed by our annual cultural fest ZIETGIEST, which brought out the talents of our students not only with respect to performance but also their organizing skills. We are starting a new journey by moving to the new campus and becoming a large institution but we are focused not to lose our priority towards quality and I am sure that with the help and support from all of you we will march towards becoming a world class institution soon in the future.

Jai Hind.

Prof. Sarit K. Das

Visit of IIT Ropar Delegation to Australia & Singapore

An academic delegation of IIT Ropar, led by Prof. S.K. Das, Director visited Australia & Singapore during April 22-May 3, 2017. The other members of the delegation included: Prof. Manohar Lal Munjal, Professor & INSA Senior Scientist, Department of Mechanical Engineering, Indian Institute of Science, Bengaluru, and Senior Senator of IIT Ropar, Prof. Deepak Kashyap, Head, Department of Civil Engineering, Dr. Harpreet Singh, Associate Dean (International Affairs) and Associate Professor, Mechanical Engineering, IIT Ropar, Dr. Rohit Y. Sharma, Associate Professor & Coordinator International University Affairs, Electrical Engineering, IIT Ropar.



Visit to Macquarie University



MoU signed between IIT Ropar and UNSW, Sydney

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 and IIT Alumni. During this tour, 8 Universities- were visited namely: Macquarie University, Sydney; Australian National University, Canberra; Commonwealth Scientific and Industrial Research Organisation (CSIRO), Canberra; University of Canberra, Canberra; Swinburne University, Melbourne; University of New South Wales, Sydney; National University of Singapore, Singapore & Nanyang Technological University, Singapore.

Recognition from American Chemical Society

Dr. C. M. Nagaraja, Department of Chemistry received the certificate of recognition from ACS publications for his valued contribution as an author and reviewer for the year 2016.

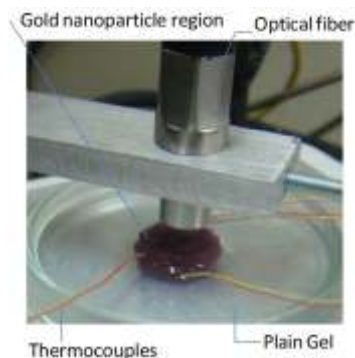
NIRF Ranking

In the recently released National Institutional Ranking Framework (NIRF) for 2017 by the Ministry of Human Resource Development, Indian Institute of Technology (IIT) Ropar is being placed at 21st rank amongst engineering institutes and 32nd in overall ranking. The institute has improved its score in Outreach & Inclusivity (OI), due to concerted efforts in promoting regional diversity, international outreach & gender inclusivity. We have been judged 11th this year as compared to 105th last year in the Outreach & Inclusivity parameter.

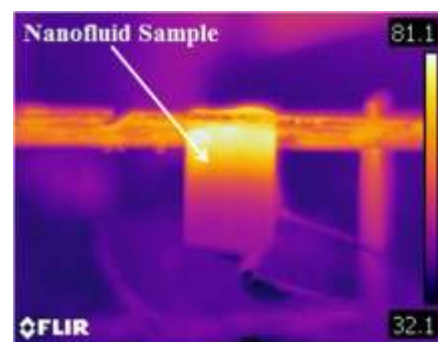
Know Our Faculty

Dr. Himanshu Tyagi, Mechanical Engineering

I have been working at IIT Ropar for more than 7 years. I have previously worked in the Steam Turbine Design Division of Siemens (in Germany and India) and in the Thermal and Fluids Core Competency group of Intel Corp (in USA). The core focus of our research group is in the field of heat transfer. We are currently working on two types of applications which involve heat transfer - harnessing solar thermal energy and optimizing the bio-heat transfer process during hyperthermia (heating of tumor cells). In the first area we are exploring better and more efficient technologies for harnessing solar thermal energy. Once developed, such technologies have the potential of enhancing the performance of various processes - E.g. space heating and cooling, water desalination, energy storage, energy efficient buildings etc. One of the ways to improve the overall efficiency of a solar collector which is being explored is the addition of nanoparticles (particle size < 100 nm) to a basefluid to enhance the fluids optical properties. Consequently, such a fluid is directly able to absorb sunlight and hence eliminates the need for a 'black' absorbing surface, which improves the overall efficiency of the solar collector system. In the second area, we are studying ways to destroy tumor cells by heating the tissue with suitable EM-irradiation (in the presence of nanoparticles). At the same time the damage to the surrounding healthy tissue is minimized by optimizing the operational parameters such as irradiation intensity, beam size, nanoparticle distribution and concentration.



Irradiated gold nanoparticle region (bio-heat transfer measurements)

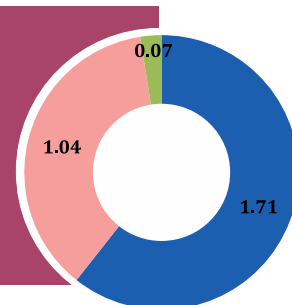


IR-image showing the measured temperature distribution within the sample

External Funded Projects

- IMPRINT Scheme
- DST
- Industrial Consultancy

Total Amount Sanctioned Rs. 2.82 Crores (March 2017- May 2017)



GIAN Course

Under the aegis of Global Initiatives of Academic Networks (GIAN), a course has been conducted on "Mechanobiology" from May 24-28, 2017 by Dr. Navin Kumar, Associate Professor and Head, Department of Mechanical Engineering, IIT Ropar. Prof. Deepak Vashishth, Director of the Rensselaer Polytechnic Institute Center for Biotechnology & Interdisciplinary Studies (CBIS) delivered a lecture on the principles, concepts and applications of Mechanobiology.



Zeitgeist-2017

IIT Ropar has also conducted its cultural festival, Zeitgeist from March 24-26, 2017. The fest mainly focused to promote the culture in the youth and had total number 1200+ participants from different colleges across India in different events as Tarang, Smack That, Nukkad Naatak, Yathartha etc.



Aarohan-2017

IIT Ropar's second Annual Sports Fest AAROHAN was organized on March 18-19, 2017 at IIT Ropar transit campus. 360 students of 10 different educational institutes participated in event. Arjuna awardee & ex-hockey captain Mr. Sandeep Singh was chief guest at the closing ceremony. Prof. S K Das, Director IIT Ropar and Chief Guest gave away the medals, trophies and certificates to the position holders.

Advitiya 2017

IIT Ropar hosted the maiden edition of Annual Technical Festival, Advitiya from March 22-24, 2017. Mr. Tapan Mishra, Director-Space Application Center was the chief guest at the event. The students participated in events like Fury Road, Hackmania, Makethon, Q fiesta and Brain Vista etc. with great enthusiasm and energy. Advitiya was concluded with talk of Diwakar Vaish, India's first completely indigenous 3D printed humanoid robot (Manav) and Varun Agarwal, entrepreneur, film maker and author.



Thematic Conference in Chemical Science



Prof. Sarit K. Das, Director welcomes Prof. Goverdhan Mehta

The Thematic Conference in Chemical Science (TC₂S - 2017) was the inaugural conference organized by the Department of Chemistry, IIT Ropar. The theme of this year's conference was Sustainable

Chemistry. During the inaugural session of the conference, Prof. Goverdhan Mehta, F.N.A., F.R.S, University Distinguished Professor and Kallam Anji Reddy Chair, School of Chemistry, University of Hyderabad, delivered the Keynote address. Many key academic professionals from the



Prof. T. Pradeep, IIT Madras

neighbouring institutions and other parts of the country participated in the conference. During the two day conference (May 15-16, 2017), sessions (1) Sustainable Inorganic and Organic Materials; (2) Sustainable Medicinal Chemistry; (3) Industry Perspectives; (4) Sustainable Alternative Energy Resources; (5) Sustainable Organic Synthesis; and (6) Sustainable Catalysis. Prof. T. Pradeep (IIT Madras), Prof. Asit K. Chakraborti (NIPER, Mohali), and Prof. Vijayamohan K. Pillai (CECRI) delivered the plenary lectures. The conference featured industrial representatives around the country including Dr. Rakeshwar Bandichhor, Dr. Reddy's Lab and Dr. Radha Rangarajan, Vitas Pharma.



Prof. Vijayamohan K. Pillai, Director, CECRI

Cynosure 2017

The Department of Mathematics, IIT Ropar organized the annual research day, Cynosure-2017 on May 13, 2017. This event aims at motivating young students and academics towards research in mathematics and allied areas. There were two invited talks by Prof. Maithili Sharan (S. S. Bhatnagar Awardee), IIT Delhi and Prof. B V Rathish Kumar, IIT Kanpur. A total of 54 participants registered for this event.



New Campus



Bhoomi Poojan for phase 1-B



Computer Science & Engineering Block

On May 17, 2017 the Bhoomi Poojan for phase 1-B was celebrated by laying the first stone by our honourable Director, Prof. Sarit K. Das. The phase 1-B construction has been awarded to Nagarajuna Construction Company (NCC) for 236 Crores. Under the phase 1-B, it is planned to construct Library, lecture hall/Auditorium of 800 capacity, workshops, CRF building, Campus school, Additional Girls and Boys hostel which could accommodate upto 1200 students, Visitors hostel of 40 capacity, Faculty quarters (T5 & T6 type), Gate complex and limited sports facilities. It is estimated that 85000 sq. mt. area will be constructed in phase 1-B.



Girl's Hostel

Women's Forum



Women's forum of IIT Ropar organized "International Women's Day" for the first time at IIT Ropar on March 08, 2017. Mrs. Minal Rohit, Sr. Scientist, ISRO was the Chief Guest of that program. We at IIT Ropar celebrated this day as a celebration of respect, appreciation love towards women for their achievements at different platforms. This year the theme was "Be bold for change". The chief guest interacted with all the participants and gave a motivating technical talk on "Electro-Optical Payloads".

As a part of Women's day celebration, we also organized cricket match and kho-kho match between U.G. and P. G. girls students on March, 2017.

New Joinings



Dr. Amar N. R. Chowdhury
Assistant Professor
Civil Engineering



Dr. C. Nirala
Assistant Professor
Mechanical Engineering



Dr. J. Kalaiselvi
Assistant Professor
Electrical Engineering



Dr. L. Vijay Anand
Assistant Professor
Civil Engineering



Dr. Lipika Kabiraj
Assistant Professor
Mechanical Engineering



Dr. Ravi Kant
Assistant Professor
Mechanical Engineering



Dr. Sachin Kumar
Assistant Professor
Mechanical Engineering



Dr. Samir Chandra Roy
Assistant Professor
Mechanical Engineering



Dr. Sagar Rohidas Chavan
Assistant Professor
Civil Engineering



Dr. Swati A. Patel
Assistant Professor
Chemical Engineering



Dr. Somitra Sanadhya
Associate Professor
Computer Science &
Engineering



Dr. Viswanath Guturi
Assistant Professor
Computer Science &
Engineering

Obituary

The Institute deeply regrets the sad demise of Mr. Maneet Kumar, Jr. Attendant (semi- skilled), Department of Mechanical Engineering who expired in road accident on April 11, 2017.