



DIRECTOR'S MESSAGE



Dear Friends,

We hope that everyone reading this column, their friends, and loved ones, are well and safe. As you know, this month marks the start of my term as a Director in IIT Ropar. In the next few weeks we shall

work together in developing a strategic plan to continue making IIT Ropar the preferred choice for pursuing higher education. We will be focusing a lot on governance issues and in identifying ways and strategies on how IIT Ropar can be globally recognized as the best Institute for teaching, learning and research. I am hopeful of its acquiring greater heights in the years to come.

However, we are aware that the pandemic continues to challenge the education and health care systems, as well as the institutions that impart them. We continue to recognize the importance of Science and Technology at this point and in this difficult situation. As in our April newsletter, and on behalf of our Board of Governors, we extend our heartfelt gratitude to all those on the front line, working to improve the well-being of hundreds of thousands of patients.

We appreciate the confidence that all of our stakeholders have placed in us and in our work. We will strive to be better each day and look forward to acquiring the momentum to achieve our mission and vision. As we move towards our goals, we must always keep in mind that we owe more to the world than it owes us. Each of us can and must do his or her bit to help build a universe that will nurture our future generation.

Jai Hind!

Prof. Rajeev Ahuja
Director, IIT Ropar

IIT ROPAR WELCOMES NEW DIRECTOR

- **Prof. Rajeev Ahuja joined as the new Director of IIT Ropar**
- **Took over charge from Prof. P. K. Raina, Officiating Director, IIT Ropar**

Prof. Rajeev Ahuja has joined Indian Institute of Technology (IIT) Ropar as the new director. He took over the charge from Professor P.K.Raina, Officiating Director, IIT Ropar. The tenure of a director at the institute is five years from the date of joining. The previous director, Prof Sarit K Das, completed his full term.

Rajeev Ahuja is the professor of computational Materials science at Uppsala University, Sweden. He is one of the most highly cited researchers in Sweden. He has done his Ph.D. from I.I.T. Roorkee in India in 1992. The same year, he has joined Uppsala University as postdoctoral fellow. He became Assistant Professor in 1996, Associate Professor in 2002 and finally Professor in 2007. His main area of interest is computational materials science with focus on energy such as Batteries, Hydrogen Storage & production, sensors as well high pressure physics. He has published 975 scientific papers in peer reviewed journals H-Index of 85 (Google Scholar), i-10 index (Google Scholar) 580 & no. of citations more than 33600, of which more than 100 are in high profile journals (like Science, Nature, Nature Materials, PNAS etc).

He has recently been elected APS-Fellow by American Physical Society (APS), USA and Appointed in the advisory Board of Journal of Materials Chemistry A (IF=10.8) & Materials Advances from Royal Society of Chemistry (England). He is the associate editor of Nano Energy (IF=16.6). He was also awarded Beller Lectureship for the APS March Meeting, 13-17 March 2017, in New Orleans, Louisiana. He been awarded the Wallmark prize for 2011 from KVA (Royal Swedish Academy of Sciences), and has previously received the Eder Lilly & Sven Thureus prize and the Benzelius prize from KVS. Prof. Ahuja is an elected member of the Swedish Royal Society of Sciences (KVS), of the board of the European High Pressure Research Group as well as of the executive board of the International Association for the Advancement of High Pressure Science and Technology.

Prof. Ahuja has supervised 30 PhD students, more than 35 postdocs and he regularly acts as a reviewer for several international funding agencies including NSF and DOE from the USA, NRC from Canada, ESF from Estonia, STW from The Netherlands, National Science Centre from Poland, European Science Foundation (ESF), Strasbourg, France, The Fund for Scientific Research – FNRS, Belgium, National Research, Development and Innovation Office from Hungary, IBS from South Korea etc. He was awarded Scheme for Promotion of Academic and Research Collaboration (SPARC), MHRD, India at IIT Indore, 2019, Award of Global Initiative of Academic Network (GIAN) of MHRD, India at IIT Indore, India (Jan. 2018) & Award of Global Initiative of Academic Network (GIAN) of MHRD, India at Pune Univ., India (26-30 Dec. 2016).

TWEET & APPLAUDS



Dr. Ramesh Pokhriyal Nishank ✓ · 9m

Incredible work done by the team! 🙌🙌

More:



IIT Ropar develops algorithm for driver drowsiness detection
thehindu.com



Ministry of Education ✓
@EduMinOfIndia

Brilliant researchers of @iitrpr have developed an algorithm for driver drowsiness detection. They have used computer vision algorithms to extract facial features such as eye closure & yawning, followed by machine learning techniques to effectively detect driver's alertness.

Ministry of Education
Government of India

IIT Ropar

has developed an algorithm for driver drowsiness detection

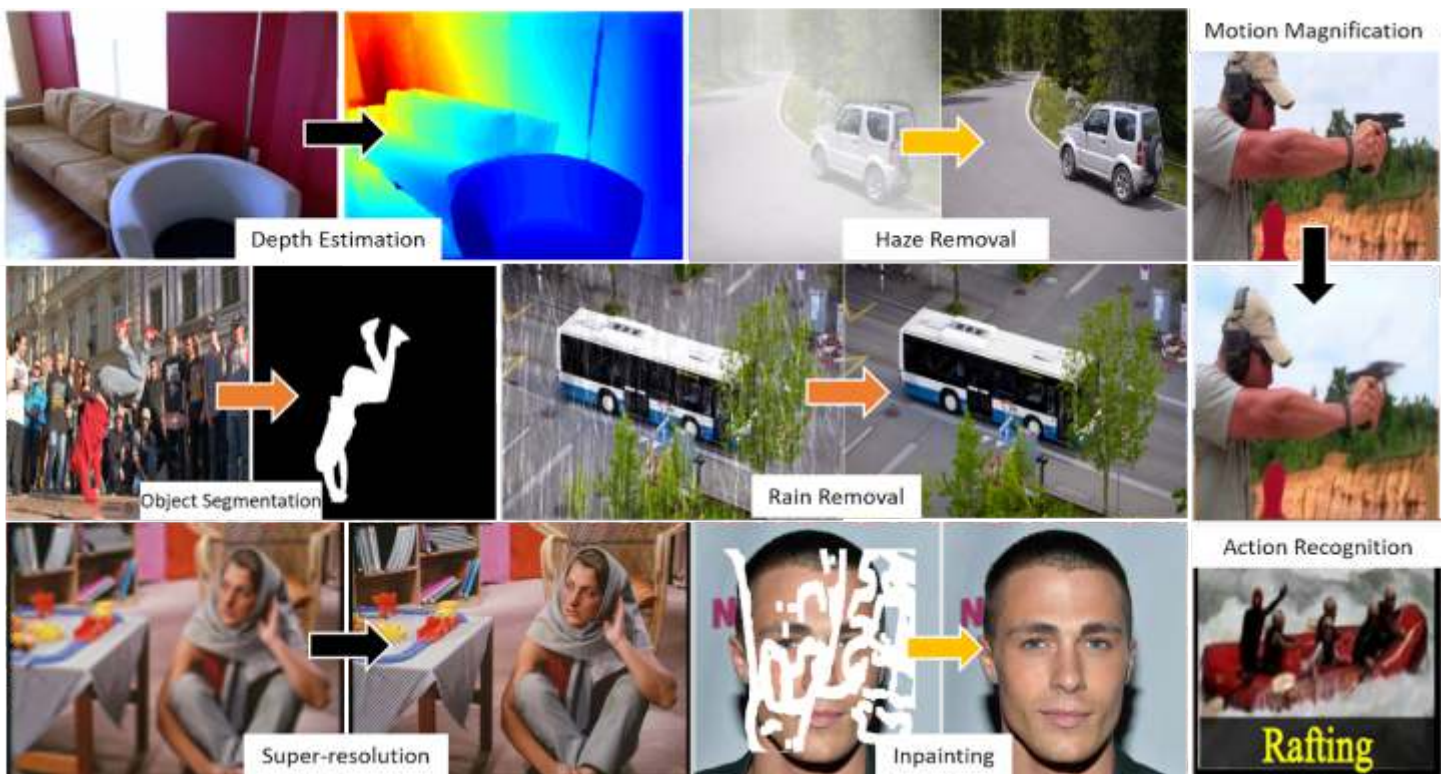


You and 9 others

3:10 PM · 20/04/21 · Twitter for Android

KNOW YOUR FACULTY

Dr. Subrahmanyam Murala is an Associate Professor in the Department of Electrical Engineering, Indian Institute of Technology Ropar, Rupnagar, Punjab, India. Dr. Murala joined the Institute as an Assistant Professor in July, 2014. He received his B.E. degree in Electrical and Electronics Engineering from Andhra University, Andhra Pradesh, India, in 2007. Afterwards, he received his M.Tech. and Ph.D. degrees from the Department of Electrical Engineering, Indian Institute of Technology Roorkee, India, in 2009 and 2012, respectively. He was a Post-Doctoral Researcher in the Department of Electrical and Computer Engineering at University of Windsor, Windsor, ON, Canada from July 01, 2012 to June 30, 2014. He is the recipient of the Faculty Research and Innovation Awards 2019-2020. His major fields of interests are Image Retrieval, Computer Vision, Medical Image Processing and Object Tracking. At IIT Ropar, Dr. Murala has established the Computer Vision and Pattern Recognition Laboratory (CVPR Lab) which focuses on computer vision, machine learning and deep learning-based applications like Human Action Recognition, Image Enhancement (Haze Removal), Moving Object Segmentation for videos, Image Depth Estimation, Image/Videos Inpainting, Image/Videos Super-resolution, Motion magnification and image deraining. Research papers from Dr. Murala's group are regularly being published in journals and conferences of international repute. Recent works from his group on moving object segmentation and image dehazing were published in the reputed International Conference of CVPR 2020. Besides contributing actively in his research group, Dr. Murala is currently handling several projects in collaboration with industries and Department of Science and Technology (DST), India. Further information about Dr. Murala and his research group can be found at <https://www.iitrpr.ac.in/subbumurala/> and <https://iitrpr.cvpr.in/>.



NEWS & EVENTS

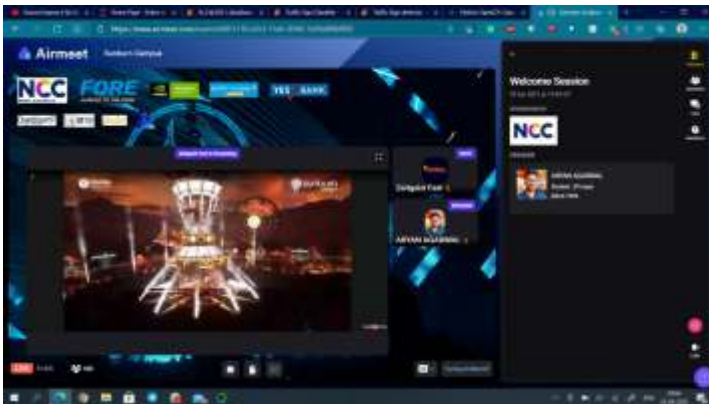
Zeitgeist 2021

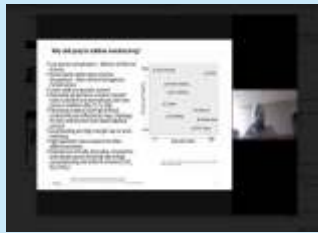
IIT Ropar organized its Annual Techno-Cultural Fest, Zeitgeist from 23rd to 25th April 2021.

Due to the unprecedented time we are currently facing, the fest was organized in online mode for the first time but with tons of fun and joy, and hopes for a better future. The fest commenced on 22nd April with the inauguration ceremony where Air Commodore Jaspal Singh Kalra was the Chief Guest and Prof. Rajeev Ahuja, Director, IIT Ropar was the Guest of Honor.

The second day of Zeitgeist'21 brought even more fun and melody. Two big events were organized on 24th April, the first was the comedy night with Harsh Gujral, the Dabangg guy from Kanpur who cracks jokes about his life experiences. And the second event was the music night by Vivek Singh, a young and melodious performer with a soulful and passionate voice.

The 3rd Day of Zeitgeist continued the legacy of sensational cultural and technical events, deliberate talks, and dazzling exhibitions.





IIT Ropar successfully hosted Faculty Development Programme on Advancements and Futuristic trends in 3-D Printing and Designing AICTE-India Training and Learning Academy.



IIT Ropar in association with AICTE-India organizes Five-day Atal Workshop on Artificial Intelligence.


IIT Ropar and Haryana Irrigation Research and Management Institute today signs agreement for Preparation of State Specific Action Plan on Water sector for Haryana State.



MoU signed between IIT Ropar and PEC Chandigarh (Agriculture and Water Technology Development Hub or AWADH for short). AWADH will setup an incubator on PEC campus and will provide fellowships and research support to both our UG and PG students and to our faculty.



The Speaker: **Prof. Min-Te (Peter) Sun**



Prof. Min-Te Sun received his B.S. degree in mathematics from National Taiwan University in 1991, the M.S. degree in computer science from Indiana University in 1995, and the Ph.D. degree in computer and information science from the Ohio State University in 2002. Since 2008, he has been with the Department of Computer Science and Information Engineering at National Central University, Taiwan. His research interests include distributed algorithm design and data mining.

For Details: <https://wasn.csie.ncu.edu.tw/advisor>

WEBINAR:
RECURRENT LEARNING ON PM_{2.5} PREDICTION BASED ON CLUSTERED AIRBOX DATASET
 Date: April 28, 2021 (Wednesday) | Time: 12.30 am IST | 3.00 pm (Taiwan's Time)

Abstract:
 The progress of industrial development naturally leads to the demand for more electrical power. Unfortunately, due to the fear of the safety of nuclear power plants, many countries have relied on thermal power plants, which will cause more air pollutants during the process of coal burning. This phenomenon as well as increased vehicle emissions around us, have constituted the primary factors of serious air pollution. Inhaling too much particulate air pollution may lead to respiratory diseases and even death, especially PM_{2.5}. By predicting the air pollutant concentration, people can take precautions to avoid overexposure to air pollutants. Consequently, accurate PM_{2.5} prediction becomes more important. In this thesis, we propose a PM_{2.5} prediction system, which utilizes the dataset from EdGreen Airbox and Taiwan EPA. Autoencoder and Linear interpolation are adopted for solving the missing value problem. Spearman's correlation coefficient is used to identify the most relevant features for PM_{2.5}. Two prediction models (i.e., LSTM and LSTM based on K-means) are implemented which predict PM_{2.5} value for each Airbox device. To assess the performance of the model prediction, the daily average error and the hourly average accuracy for the duration of a week are calculated. The experimental results show that LSTM based on K-means has the best performance among all methods. Therefore, LSTM based on K-means is chosen to provide real-time PM_{2.5} prediction through the Linebot.

Registration Link: <https://forms.gle/QzxCbCpM2zkgWmm7>

The Indo-Taiwan Joint Research Centre on AI & ML organized a webinar on Recurrent Learning on PM_{2.5} Prediction based on Cluster Airbox Dataset by Prof. Min-Te Sun, Assistant Professor, at the Department of Computer Science and Information Engineering at National Central University, Taiwan by Prof. Min-Te Sun (Su-en)

IIT Ropar planted 200 trees on Earth Day to enjoy nature and appreciate its beauty every day.



IIT Ropar organized Hindustani Classical Workshop to be conducted by Alankar Music club.



FAREWELL CEREMONY OF FORMER DIRECTOR, PROF. SARIT K. DAS

IIT Ropar fraternity bid an emotional farewell to Prof. Sarit K. Das, Director, IIT Ropar. The event was presided over by the IIT Ropar fraternity followed by an address from Prof. P.K. Raina, Officiating Director, IIT Ropar. This was followed by a formal adieu to Prof. Sarit K. Das.



STARTUP NEWS

TIF AWaDH presents AmbiTag - the single use temperature data logger. Measure temperature anywhere in real-time, keep your products and perishables safe, and ensure the safe delivery of the COVID vaccine to end-users.

DST TECHNOLOGY INNOVATION HUB



Indian Institute Of Technology Ropar

AWARDS & RECOGNITIONS

Faculty Awards



Dr. Rajesh Kumar, Assistant Professor, Department of Biomedical Engineering got "MIT-MISTI Global Seed Funds Award" collaborative research activity and exchange of students as well as a visit of faculty members between MIT and IIT Ropar. His project is on "Accurate Optical Sensing for Efficient Fertilizer Use and Increased Yield in Small Farms."

Dr. Neha Sardana, Assistant Professor, IIT Ropar is selected for the membership of "Indian National Young Academy of Sciences [INIAS] 2021-25".



Student Awards



Harjot Kaur, B.Tech. student of IIT Ropar has been selected for the Harvard University College Project for Asian and International Relations 2021 conference.



CONGRATULATIONS
MS. YASHASVI AND MR. KAPIL, DOCTORAL STUDENTS, DEPARTMENT OF ELECTRICAL ENGINEERING
FOR WINNING
POWERGRID POSOCO AWARD PPSA - 2021
UNDER DOCTORAL CATEGORY
WHICH INCLUDES A CASH PRIZE OF 1 LAKH AND A CERTIFICATE.

Two of our Doctoral Students Ms. Yashasvi and Mr. Kapil won the POWERGRID POSOCO award PPSA - 2021 under Doctoral Category, which includes a cash prize of 1 Lakh and a certificate.



Prabhjot Singh, Aditya Kumar, Dikshant Vats, Deepali Gaikwad, Ritesh, Vikrant Jaglan and Mazhar, Nalin, Suryansh, Hardik and Mehak Gupta (MBS School) have been selected as the finalists for Solar Decathlon India 2021.



Mr. Kamal Dhull, Ms. Harjot Kaur, Ms. Pankhuri Saxena, Mr. Rahul Bharti Btech students of IIT Ropar selected for the prestigious Harvard HPAIR Conference 2021.



Ms. Nishtha Kashyap, MTech student of Department of Biomedical Engineering, IIT Ropar got the Charpak Lab Scholarship Programme 2021.

IIT ROPAR IN NEWS

IIT Ropar ranked among top 80 in THE Emerging Economies University Rankings 2020, being ranked 71st.



IIT Ropar researchers have come up with post-disaster management communication during emergency situation with the concept of device to device (D2D) communication with drones.



Kendriya Vidyalaya at IIT Ropar started its operations from March 15th, 2021 with Sh. Anil Kumar joining as the In Charge Principal.

New Kendriya Vidyalaya to start in March at IIT Ropar campus

SAJJAN SAINI
PUNJAB EXPRESS BUREAU
Rupnagar, March 12

A good news for the Ropar City residents, Kendriya Vidyalaya at IIT Ropar will start its operations from March 15, 2021 with Anil Kumar joining as the In Charge Principal. Presently he is a Vice Principal at Bathinda KV-1. He will be looking after the admission process and shall administer the day-to-day school operations. The staff will be appointed through Regional Office, Kendriya Vidyalaya, Chandigarh and the staff will join by April 2021.

The Union Education Minister announced the launch of the new Kendriya Vidyalayas on Twitter on 4th March 2021, congratulating the students and parents adding that two new Kendriya Vidyalaya Schools will be launched in Karnataka and Punjab making the total number of Kendriya Vidyalayas in the country to 1247.



The school is in Project mode, wherein the whole expenditure from construction to providing infrastructure and also Salaries to the KV staff will be borne by IIT Ropar. The school will begin from Class Ist, for which application will be made through online mode. There will be 40 seats for the same. Likewise, admission for Classes IInd to Vth will be through offline mode and the seats will be 40 for each class. So far, one section for each class is permissible. The selection of the students will be according to the KV norms. The selection will be made under six categories, First category will be for IIT fraternity, Second for Central Government Employees (Transferable/Non-Transferable Job), Third for Central Government Autonomous bodies/PSUs (Transferable/Non-Transferable Job), Fourth will be for State Government Employees (Transferable/Non-Transferable Job), Fifth will be for State Government Autonomous Bodies/PSUs Employees (Transferable/Non-Transferable Job) and the Sixth and the last for Civilians. The admission for 1st Class will begin in March 2021, whereas the admission for classes IInd to Vth will begin in April 2021.

IIT Ropar professors develops alternative to alcohol-based disinfectant, Electrolyzed water can be used as "a powerful natural tool" to combat COVID-19.



IIT Ropar researchers have come up with a concept of acoustic repellent system (ARS) for crop protection against animal attacks in agricultural fields.

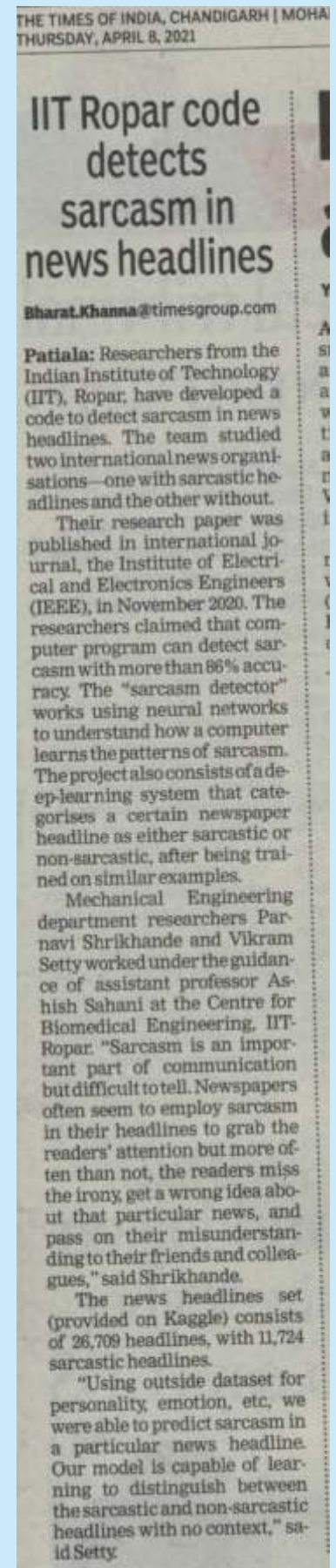


Patiala: The researchers at IIT Ropar have come up with a concept of acoustic repellent system (ARS) for crop protection against animal attacks in agricultural fields. The animals would be detected and repelled by this repellent and monitory system from the fields by using ultrasonic sound frequencies beyond the hearing capacity of the animals.

IIT Ropar researchers develop algorithm for driver drowsiness detection using ML and Computer vision to extract facial features such as eye closure and yawning to effectively detect driver's alertness.



IIT Ropar researchers have developed a code to detect sarcasm in news headlines. The "Sarcasm Detector" works using neural networks to understand how a computer learns the pattern of sarcasm.



राजभाषा गतिविधियाँ

अभिनंदन



श्री दिवाकर शर्मा
वरिष्ठ सहायक
भंडार एवं क्रय अनुभाग



श्री गुरदीप सिंह
कनिष्ठ अधीक्षक
विद्यार्थी मामले अनुभाग



श्री पुनीत गर्ग
सहायक कुलसचिव
विद्यार्थी मामले अनुभाग

केन्द्रीय हिंदी प्रशिक्षण संस्थान, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार द्वारा आयोजित किए गए हिंदी शब्द संसाधन (हिंदी टंकण) पत्राचार प्रशिक्षण कार्यक्रम (59वां सत्र) (अवधि 01 फरवरी 2020 से माह जुलाई 2020) की दिनांक 03 नवंबर 2020 को संपन्न परीक्षा में भारतीय प्रौद्योगिकी संस्थान रोपड़ के 03 सदस्य विशेष प्रथम श्रेणी में उत्तीर्ण हुए।

भारत के 72वें गणतंत्र दिवस के उपलक्ष्य पर ऑनलाइन देशभक्ति गीत गायन प्रतियोगिता का आयोजन

भारत गणराज्य का 72वां गणतंत्र दिवस बड़े ही उत्साह के साथ मनाया गया। इसी उपलक्ष्य में, प्रति वर्ष की तरह इस वर्ष भी गणतंत्र दिवस के उपलक्ष्य पर भारतीय प्रौद्योगिकी संस्थान रोपड़ के हिंदी प्रकोष्ठ द्वारा ऑनलाइन माध्यम से संस्थान के सदस्यों के लिए दिनांक 22 जनवरी, 2021 को देशभक्ति गीत गायन प्रतियोगिता का आयोजन किया गया। इस प्रतियोगिता में संस्थान के सभी स्तरों से उत्साहजनक प्रतिक्रिया प्राप्त हुई। इस प्रतियोगिता के परीक्षक के रूप में डॉ. भावेश गर्ग, सहा. प्राध्यापक तथा श्री गौतम शर्मा, सहा. कुलसचिव थे।



देशभक्ति गीत गायन प्रतियोगिता में
प्रस्तुति देते हुए संस्थान की छात्रा

21 फरवरी, 2021 को भा. प्रौ. सं. रोपड़ में
ऑनलाइन माध्यम से एक दिवसीय मातृभाषा दिवस का आयोजन



डॉ. अभिषेक तिवारी मातृभाषा
में गीत प्रस्तुत करते हुए।

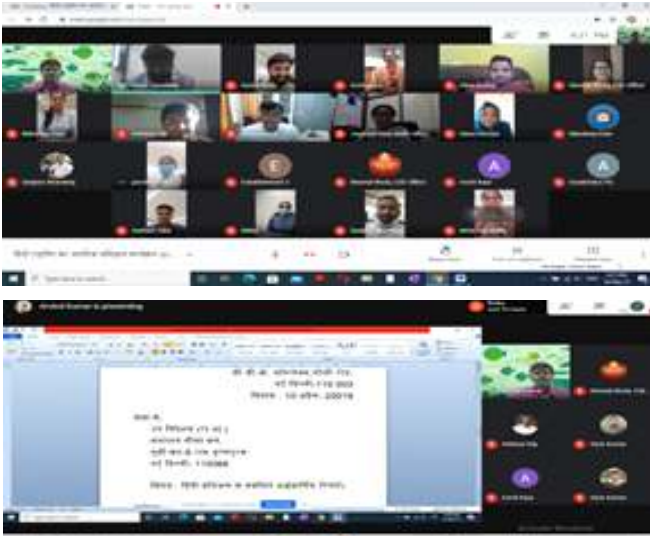
भा.प्रौ.सं. रोपड़ में दो प्रतियोगिताओं के आयोजन के साथ 21 फरवरी, 2021 को मातृभाषा दिवस आयोजित किया गया। मातृभाषा कविता एवं गीत गायन प्रतियोगिता के परीक्षक पैनल में डॉ. ब्रजेश रावत और डॉ. शशि शेखर झा वहीं भाषण प्रतियोगिता के परीक्षक पैनल में डॉ. देवर्षि दास तथा डॉ. अभिषेक तिवारी थे। इन प्रतियोगिता में संस्थान के सभी स्तरों से उत्साहजनक प्रतिभागिता देखी गई। विजेताओं को पुरस्कार राशि से पुरस्कृत किया गया।

दिनांक 12 मार्च 2021 को ऑनलाइन हिंदी कार्यशाला का आयोजन

हिंदी प्रकोष्ठ, भा.प्रौ.सं. रोपड़ ने दिनांक 12 मार्च, 2021 को ऑनलाइन माध्यम से **“कोरोना से बचाव: ज्ञान के प्रसार में हिंदी सशक्त माध्यम”** विषय पर कार्यशाला का आयोजन किया। इस कार्यशाला में वक्ता के रूप में भा.प्रौ.सं. रोपड़ के प्रौद्योगिकी नवाचार हब के वरिष्ठ वैज्ञानिक अधिकारी डॉ. नरेश राखा थे। डॉ. राखा ने कोरोना महामारी के समय जागरूकता अभियान में हिंदी की भूमिका पर प्रकाश डाला। साथ ही, कोरोना संक्रमण से बचाव हेतु संस्थान द्वारा किए गए अनुसंधानों तथा इनके प्रतिफलन में सृजित उपकरण/यंत्रों पर भी विस्तृत बात की।



चार दिवसीय ऑनलाइन आंतरिक प्रशिक्षण कार्यक्रम: हिंदी टाइपिंग/आशुलिपि प्रशिक्षण

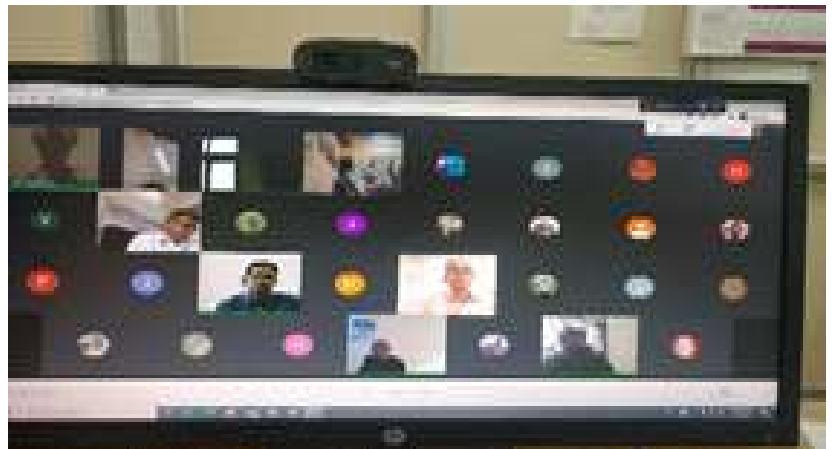


केन्द्रीय हिंदी प्रशिक्षण संस्थान, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार द्वारा आयोजित किए जा रहे हिंदी शब्द संसाधन (हिंदी टंकण) पत्राचार प्रशिक्षण कार्यक्रम (61 वां सत्र) हेतु भारतीय प्रौद्योगिकी संस्थान रोपड़ के पंजीकृत 23 सदस्यों की माह जुलाई 2021 में होने वाली परीक्षा को केन्द्र में रखते हुए दिनांक 15 से 18 मार्च, 2021 तक चार दिवसीय ऑनलाइन आंतरिक प्रशिक्षण कार्यक्रम का आयोजन किया गया।

इस ऑनलाइन आंतरिक प्रशिक्षण कार्यक्रम में प्रशिक्षक के रूप में श्री अरविंद कुमार, सहायक निदेशक, हिंदी शिक्षण योजना, चण्डीगढ़ को आमंत्रित किया गया था। प्रशिक्षणार्थियों ने हिंदी इनस्क्रिप्ट कुंजीपटल पर टाइपिंग करना, हिंदी में सारणी प्रारूप बनाना, हिंदी में विभिन्न आदेश, पत्रों और ज्ञापन को बनाना तथा हस्तलेख आदि का अभ्यास किया।

05 दिवसीय ऑनलाइन अभिमुखी कार्यक्रम में संस्थान की सहभागिता

राजभाषा नीति के सफल कार्यान्वयन के उद्देश्य को केंद्र में रखते हुए केंद्रीय हिंदी प्रशिक्षण संस्थान, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार द्वारा राजभाषा अधिकारियों हेतु आयोजित 05 पूर्ण दिवसीय ऑनलाइन अभिमुखी कार्यक्रम (15 मार्च 2021 से 19 मार्च 2021 तक) में संस्थान के हिंदी अनुवादक डॉ. गिरीश प्रमोदराव कठाणे ने सहभागिता ली।



SPORTS & CULTURE

IIT Ropar celebrated Lohri with a bonfire and offer groundnuts and sweets as a thanksgiving to the almighty on the conclusion of harvesting of crops and onset of the spring season.



The 72nd Republic Day at IIT Ropar was celebrated with great patriotic fervour and with spectacular tricolor décor echoing the spirit of patriotism. Sadhbhavna Daud was also organized during the event.



INFRASTRUCTURE DEVELOPMENT

In between January 2021 to April 2021 the buildings of Phase 1B that have been completed and being taken over by the Institute are the Visitor's Hostel (Guest House) and the Campus School. Also construction of the Central Research Facility (CRF) building is complete, the Library Lecture Hall and Auditorium which is 85% complete, the second Dining Hall which is complete and ready to be taken over by the Institute. The Sewage Treatment Plant (500 KLD) of the Phase 1B is completed and to be commissioned soon.



CRF Building



Dining Hall



Library and Lecture Hall



Super Academic Block

MARCHING FORWARD AS A NEW TEAM- NEW JOININGS



Sh. Ram Prakash
Library Professional Trainee
(on Contract)

UPCOMING EVENT

9th International Conference on
**Advancements and Futuristic Trends in Mechanical and
Materials Engineering**
AFTMME 2021

December 9-11, 2021 at IIT Ropar, India



Organized by



**Indian Institute of Technology
Ropar, India**



**Society of Materials and Mechanical
Engineers (SOMME)**

Important Dates

**Abstract Submission
(30/07/2021)**

**Abstract Acceptance
(31/08/2021)**

**Early Bird Registration
(30/09/2021)**

ANNOUNCEMENT & CALL FOR PAPERS

Organizing Team, AFTMME 2021

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