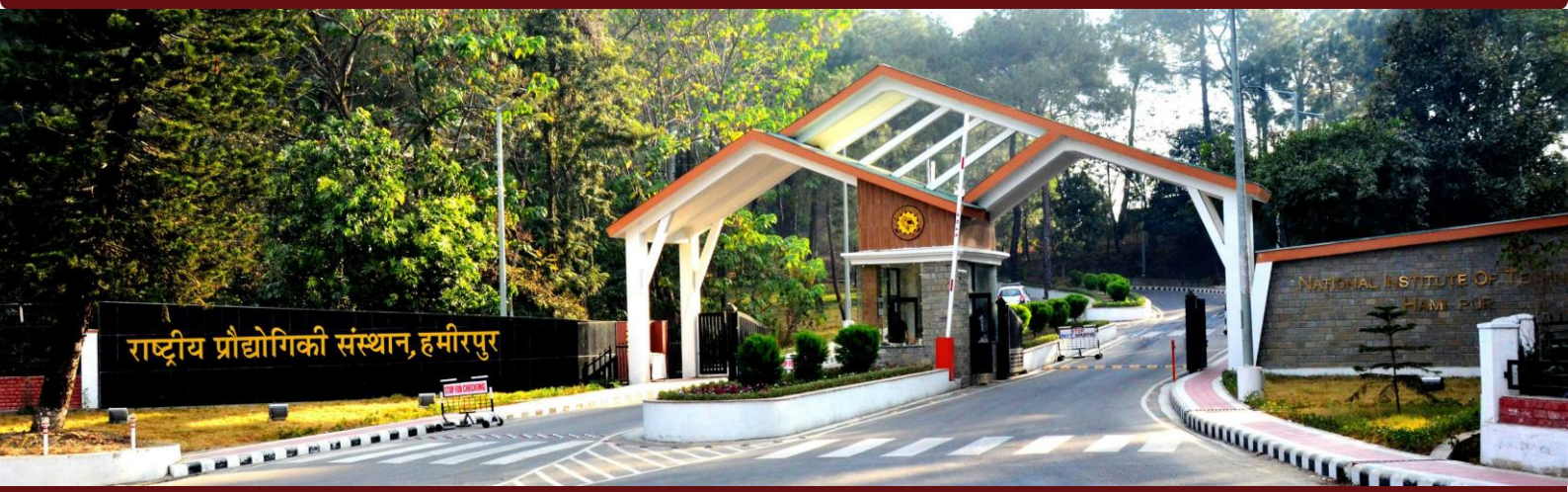
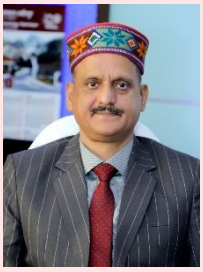
राष्ट्रीय प्रौद्योगिकी संस्थान हमीरपुर
(एक राष्ट्रीय महत्व का संस्थान)
National Institute of Technology Hamirpur
(An Institute of National Importance)
150 YEARS OF CELEBRATING THE MAHATMA



Institute Newsletter Volume 11, Issue 1, 2021

MESSAGE FROM THE DIRECTOR



Greetings from the National Institute of Technology, Hamirpur, Himachal Pradesh!

It gives me immense pleasure to witness another issue of this newsletter roll out despite the extraordinary state of affairs that has challenged and tested us at each step during the last year. It is a matter of pride for us to share our progress against these uncertainties of COVID-19. The successful publication of this newsletter itself indicates how well our institution has responded to what has become the new normal. With relentless efforts, we have acquired majestic heights at the culmination of this academic session. As rightly stated by Peter Hilton, "Adaptability to change is itself a hallmark of successful education." Undoubtedly, we can contend that we have been able to adapt to the situation brilliantly and are on our way to attaining transcendence.

As time progressed, we did glimpse a ray of hope, but that became diminished under the unfortunate circumstances created due to the second wave of the pandemic. The damage was inevitable, and we suffered irreparable losses. As the world tries to get back on track, this newsletter comes as a new beginning for all of us. It is an accurate depiction of our faculty's diligent endeavours and a reflection of the remarkable progress made on the grounds of this institution amidst these challenging times. While maintaining consistency in our approach and constantly incorporating innovation with novel ideas, we have upgraded our expertise in the realms of virtual learning and research.

NIT Hamirpur has been actively involved in helping the Indian community during this time of crisis and has come up with diverse and intuitive ideas that ensured the safety of thousands. Garnering resources and transforming them into intelligent solutions, the institute has bestowed a boon upon those who seek guidance and support. The times called for us to generate solutions that work at par with the new mode of deliberation. As we went ahead to achieve this, we faced challenges that we had never encountered before. The outcome was a fair mix of alterations and upraised standards that pushed us not only to look beyond the horizon but also to examine our pre-existing knowledge and execute it in a contemporary manner. These changes have been a significant mark of the advancement that we have made in the field of engineering education, all of which are exhibited in this newsletter. With numerous ventures promoting the base of research at NITH, we have observed a prosperous academic year and continue to enhance its quality with workshops and training sessions designed to encourage collaborations with our fellow institutes in various research domains. Creating a massive information network through this newsletter, I look forward to all the stakeholders that are actively contributing towards the advancement of our fine institution, hoping that they strive towards excellence and provide a testament for the betterment of our country.

Unfortunately, we lost hardworking and dedicated faculty Dr Narottam Chand to COVID-19. NITH family is in a state of shock due to his untimely departure to heavenly abode. May his soul rest in peace and almighty give strength to his family to withstand this irreparable loss.

Jai Hind.

Prof. Lalit Kumar Awasthi

Inside This Issue

External sponsored Research and Development Projects sanctioned

Sr. No.	Title of R&D Project/ Patent	Name of Funding Agency	Heading Status [PI / Co-PI(.)]	Present Status of Project
1.	Development of Quantum Dots and Pb+2 Free Hybrid Perovskite Based Flexible Photovoltaic Devices.	SERB-DST	Dr. Gopal Rawat	Ongoing
2.	Design and Fabrication of Low Cost Nanoelectronic Devices for Energy and Environment Applications	SERB-DST	Dr. Gopal Rawat	Ongoing
3.	Experimental and Numerical Analysis for Stabilization of Antibubbles	SERB, New Delhi	Dr. Tara Chand Kumawat	Ongoing
4.	Post Project Evaluation (End Line Evaluation) of projects under WDC-PMKSY (erstwhile IWMP)-Work Allocation Regarding	HIPA, Shimla	Dr. Manoj Sharma (PI) Dr. Piar Chand	Ongoing
5.	Machine learning and deep learning based cyber security framework for identification of phising websites & malicious uniform resource locators (URLs)	SERB, New Delhi	Dr. Basant Subba	Ongoing

Consultancy Projects sanctioned

S. No.	Name of Department	Amount (in Rs.)	No. of Agencies
1.	Department of Civil Engineering	1,53,80,339	287
2.	Department of Electrical Engineering	23,036	2
Total		**1,54,03,375**	**289**

Patents Filed

S. No.	Title	Patent Application Number	Inventor / Author
1.	"Development of a Modular Hall Effect-Based Sensor Network for Pipeline Integrity Monitoring".	2021101442	Dr Gopal Rawat, Chandra Shekhar Singh Chandel , Devesh Mishra , Dr Praveen Kumar Sahu
2.	(PETS-NET) IoT Enabled Petroleum Sensor Network for Detecting and Locating Leakage of a Pipeline in Environmental Application	202131007171 A	Dr Praveen Kumar Sahu Devesh Mishra Chandra Shekhar Singh Chandel Dr Gopal Rawat
3.	Graphene oxide Reinforced Geopolymer Concrete Comprising Waste Foundry sand and Recycled concrete Aggregates	201911036565A	Dr. Pardeep Kumar
4.	Green Concrete using waste Foundry sand and Recycled Concrete Aggregates and manufacturing process Thereof	201911030834A	Dr. Pardeep Kumar

MOU(s) signed with National and International organizations

S. No.	Name of the party with whom MOU signed	Date of Signing
1.	Government ITI Udaipur Distt. Lahaul & Spiti	05/03/2021
2.	Government ITI Shamshi Distt. Kullu	05/03/2021
3.	CSIR- Institute of Himalayan Bioresource Technilogy Palampur (HP)	01/03/2021
4.	Government Polytechnic Hamirpur Distt Hamirpur (HP)	04/02/2021
5.	Government Polytechnic Bilaspur Distt Bilaspur (HP)	04/02/2021
6.	Government Polytechnic Sundernagar Distt Mandi (HP)	04/02/2021
7.	Government Polytechnic Lahaul & Spiti (HP)	04/02/2021
8.	Jawaharlal Nehru Government Engineering College Sunder nagar, Distt. Mandi HP	15/01/2021
9.	Government Polytechnic Seobag Distt. Kullu HP	15/01/2021
10.	Government Polytechnic Talwar Distt. Kangra HP	15/01/2021
11.	Himachal Pradesh Technical University Hamirpur HP	18/11/2020
12.	Sardar Vallabhbhai Patel Cluster University Mandi	22/10/2020

Ph.D. Completed

S. No.	Title of Thesis	Supervisor / Co-Supervisor	Ph.D. Thesis Status
1.	Investigations on Machinability and Wear Behaviour of Aluminium Matrix Nanocomposite	Dr. P. K. Sood	Notification issued on 01/12/2020
2.	Energy Efficient Operations in Wireless Sensor Networks	Dr. Narottam Chand Dr. Naveen Chauhan	Completed
3.	Sentiment Based Information Diffusion in Online Social Networks	Dr. T. P. Sharma	Completed
4.	Inhibition of Aggregation and Post-translational Modification of Human γD-crystallin: Implications in Cataract Prevention	Dr. K. S. Ghosh	Submitted
5.	Fabrication and Electrical characterization of metal/titanium dioxide/ silicon and metal/silicon hetrojunctions	Dr. Kuldeep Kumar	Completed
6.	Statistical Characterization and Performance Evaluation of Wireless Channels.	Dr Ashok Kumar	Completed
7.	Assessing the Parameters of Aviation Fuel Consumption	Dr. Somesh Kumar Sharma	Awarded
8.	Investigations on Machinability and Wear Behaviour of Aluminium Matrix Nanocomposite	Dr. P.K. Sood	Awarded
9.	Thermal Analysis of Bio Mass Gasification for IC Engine Application	Dr. N.S. Thakur	Awarded
10.	Investigation of Sliding Wear Behaviour of AISI H13 Tool Steel	Dr. Rajesh Kumar Sharma	Awarded

Journal Papers

- Anant Kumar Verma, C. Subramanian, R. K. Jarial, Pedro Roncero-Sánchez, and U. M. Rao, "A Robust Lyapunov's Demodulator for Tracking of Single-/Three-Phase Grid Voltage Variables," IEEE Transactions on Instrumentation and Measurement, vol. 70, pp. 1-11, Dec. 2020.
- Anant Kumar Verma, C. Subramanian, and R. K. Jarial, "An Error Demodulation Technique for Single-Phase Grid Synchronization/LVRT Applications," IEEE Systems Journal, Early Access, Mar. 2021.
- Anant Kumar Verma, C. Subramanian, R. K. Jarial, and Pedro Roncero-Sánchez, "An Enhanced Discrete Time Oscillator-Based PLL-Less Estimation of Single-Phase Grid Voltage Parameters," IEEE Transactions on Industrial Electronics, Mar. 2021
- Vineet Kumar and R. Naresh, "Application of BARON Solver for Solution of Cost Based Unit Commitment Problem," International Journal on Electrical engineering and Informatics, vol. 12, No. 4, pp.807-827, December, 2020.
- Rajesh Kumar & Arun Kumar, "Optimal scheduling for solar wind and pumped storage systems considering imbalance penalty," Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Nov. 2020
- Rajesh Kumar & Arun Kumar, "Optimal scheduling of variable speed pumped storage, solar and wind energy system," Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 2021.
- S. Sharma and Y. R. Sood, "Microgrids: A review of status, technologies, software tools, and issues in Indian power market," IETE Tech. Rev., pp. 1–22, Dec. 2020.
- Anil Kumar Yadav, Piyush Saxena, Prerna Gaur, and Pawan Kumar Pathak, "Self-Tuning Fuzzy PID Controller for Servo Control of Hard Disk Drive with Time Delay," International Journal of Information Technology, Springer, vol. 13, no. 1, pp. 109-114, February 2021.
- Anil Kumar Yadav, Pawan Kumar Pathak, Prerna Gaur, "Robust Control and Stability Analysis of Computerized Numeric Controlled Machine Tool under Parametric Uncertainty," Journal Européen des Systèmes Automatisés, vol. 53, no. 5, pp. 661-670, October 2020.
- Tyeb, N Kumar, A Kumar and V Verma, "Agar-Iodine Transdermal Patches for Infected Diabetic Wounds", ACS Appl. Bio Mater., 2020, 3, 7515-7530
- K Jahan, S Tyeb, N Kumar, V Verma, "Bacterial Cellulose-Polyaniline Porous Mat for Removal of Methyl Orange and Bacterial Pathogens from Potable Water", J Poly. & Environ., 2021, 29, 1257-1270
- F. H. Bhat, G. Anjum, Ravi kumar, Manzoor A. Malik, R. J. Choudhary, D. K. Shukla, "XAS and XPS analysis of double magnetic transition, canonical spin glass behavior and magnetoresistance in LaMn1-xCoxO3 (0.1<x<0.5)" system , Ceramic International, 2021, 47, 6753-6713
- F. H. Bhat, Ghazala A. khan, Gitansh Kataria, RaviKumar, Deshdeep Sahdev and Manzoor A. Malik, "Study of canonical spin glass behavior in Co doped LaMnO3", AIP Advances, 2021, 11, 025122(5)
- Pankaj Bhardwaj, Jarnail Singh, Rajesh Kumar, Ravi Kumar, Vikram Verma, "Structural, optical and magnetic characterization of Ni2+ ions doped chromium oxide (Cr2O3) nanoparticles", Solid State Sciences, 2021, 115, 106581
- Jarnail Singh, Rajesh Kumar, Vikram Verma, Ravi Kumar, "Structural and optoelectronic properties of epitaxial Ni-substituted Cr2O3 thin films for p-type TCO applications", Materials Science in Semiconductor Processing, 2021, 123, 105483(6)
- Amarjit Singh, Jarnail Singh, Manoj Kumar Sinha, Ravi Kumar, Vikram Verma, "Compaction and Densification Characteristics of Iron Powder/Coal Fly Ash Mixtures Processed by Powder Metallurgy Technique", Journal of Materials Engineering and Performance, 2021, 30, 1207-1220
- R. Siddiqui, R. Maurya, P. K. Katiyar and K. Balain, "Superhydrophobic, self-cleaning carbon nanofiber CVD coating for corrosion protection of AISI 1020 steel and AZ31 magnesium alloys" Surface and Coatings Technology, 2020, 404, 126421.
- P. Chand, A. Joshi and Vishal Singh, "Impact of phase segregation on optical and electrochemical property of BiPO4 nanostructures for energy storage applications", Journal of Materials: Science Materials in Electronics, vol. 24, no. 10, pp. 1-15, Oct. 2020.
- Ashish Kaushal and Vishal Singh, "Effect of filler loading on the shielding of electromagnetic interference of reduced graphene oxide reinforced polypropylene nanocomposites prepared via a twin-screw extruder", Journal of Materials: Science Materials in Electronics, Oct. 2020 (online),
- P. Chand, A. Joshi and Vishal Singh, "High performance of facile microwave-assisted BiPO4 nanostructures as electrode material for energy storage applications",Materials Science in Semiconductor Processing, vol. 122, pp. 105472, Feb. 2021.
- Vijay Kumar and Dinesh Kumar, "A Systematic Review on Firefly Algorithm: Past, Present, and Future", in Archives of Computational Methods in Engineering, Springer, 2020.
- Lovepreet Singh and Vishal Singh, "Synthesis of Au@PANInanocomposites by complexation method and their application as label-free chemo probe for detection of mercury ions", Bulletin of Materials Science, vol. 44, pp. 307, Nov. 2020.

Journal Papers

- Ashish Kaushal and Vishal Singh, “Electromagnetic interference shielding response of multiwall carbon nanotube/polypropylene nanocomposites prepared via melt processing technique” Polymer Composites, Nov. 2020 (online), doi: 10.1002/pc.25889
- Richa Sharma, Teek Parval Sharma, Ajay Kumar Sharma, "TVDD: Topology Based Vehicular Data Dissemination Scheme for stability Optimization in IoV," Inderscience International Journal of Sensor Networks (Accepted)
- Sejal Gupta, Ritu Garg, Nitin Gupta, Waleed S Alumany, Uttam Ghosh, Pradip K. Sharma, “Energy-effcient Dynamic Homomorphic Security Scheme for Fog Computing in IoT Networks," in Journal of Information Security and Applications, Elsevier, 58(102768), pp. 1-8, Feb 2021.
- Anshu Thakur, Ashok Kumar, Nitin Gupta, and Puspita Chatterjee “Secrecy Analysis of Reconfigurable Underlay Cognitive Radio Networks with SWIPT and Imperfect CSI", in IEEE Transacations on Network Science and Engineering, Early Access, Nov, 2020.
- Gupta, A., Yadav, D. A novel approach to perform context-based automatic spoken document retrieval of political speeches based on wavelet tree indexing. Multimed Tools Appl (2021). https://doi.org/10.1007/s11042-021-10800-8
- Divakar Yadav, Arun Kumar Karn, Arti Dhiman, Sakshi Sharma, Anurag Giddalur, Muskan, and Arun Kumar Yadav, Microaneurysm Detection using Color Locus Detection Method, Volume 176, May 2021, 109084, Measurement Elsevier, https://doi.org/10.1016/j.measurement.2021.109084
- Yadav, D., Akanksha, Yadav, A.K. (2020). A novel convolutional neural network based model for recognition and classification of apple leaf diseases. Traitement du Signal, Vol. 37(6), pp. 1093-1101, 2020. https://doi.org/10.18280/ts.370622.
- Shashank Srivastav, P. K. Singh, Divakar Yadav. A novel approach for fast text matching using WBTC and wavelet tree, EAI Endorsed Transactions on Scalable Information Systems, ISSN: 2032-9407, 23 Oct 2020.
- Sourabh Katoch, Sumit Singh Chauhan and Vijay Kumar," A Review on Genetic Algorithm: Past, Present, and Future". Multimedia Tools and Applications, Springer, 2020.
- Rajesh Kondabala, Vijay Kumar, and Amjad Ali, "Design a Synthetic Glucose Receptor using Computational Intelligence Approach", in Journal of Molecular Graphics and Modelling, Elsevier, 2020
- Dilbag Singh, Manjit Kaur, and Vijay Kumar, " Rapid COVID-19 diagnosis using ensemble deep transfer learning models from chest radiographic images", Journal of Ambient Intelligence and Humanized Computing, Springer, 2020
- Dilbag Singh, Manjit Kaur, Vijay Kumar," Drug Synergy Prediction Using Dynamic Mutation based Differential Evolution", Current Pharmaceutical Design, Bentham Science, 2020.
- Neeraj Kumar, Vijay Kumar, Sunil Singla,"Single Image Defogging using Deep Learning Techniques: Past, Present and Future", in Archives of Computational Methods in Engineering, Springer, 2020
- Dilbag Singh, Manjit Kaur, Vijay Kumar, "Densely connected convolutional networks-based COVID-19 screening model", Applied Intelligence, Springer, 2020
- Ashish Girdhar, Himani Kapur, Vijay Kumar, " A novel Grayscale image encryption approach based on chaotic maps and image blocks", Applied Physics B: Lasers and Optics, Springer, 2020.
- Sahil Sharma and Vijay Kumar, "Performance evaluation of machine learning based face recognition techniques", Wireless Personal Communications, Springer.
- Manjit Kaur, Vijay Kumar , Vaishali Yadav, Dilbag Singh, Naresh Kumar, Nripendra Narayan Das, "Metaheuristic-based Deep COVID-19 Screening Model from Chest X-Ray Images", Journal of Healthcare Engineering, Hindawi, 2021.
- Isha Sharma, Vijay Kumar, and Sanjeewani, "A Comprehensive Survey on Grey Wolf Optimization", Recent Advances in Computer Science and Communications, 2021
- Mohammad Dehghani, Mohammad Mardaneh, O.P. Malik, and Vijay Kumar, "Football Game Based Optimization: an Application to Solve Energy Commitment Problem", International Journal of Intelligent Engineering and Systems. 2021.
- Saroj, Sushil Kumar, Rakesh Kumar, and Nagendra Pratap Singh. "Fréchet PDF based Matched Filter Approach for Retinal Blood Vessels Segmentation." Computer Methods and Programs in Biomedicine 194 (2020): 105490.
- K. Susheel Kumar, Nagendra Pratap Singh. "Segmentation of Retinal Blood Vessel structure using Birnbaum-Saunders (Fatigue Life) Probability Distribution Function." International Journal of Medical Engineering and Informatics. (Accepted and Under Publication).

Journal Papers

- Kusum Lata, Pradeep Singh, Kamlesh Dutta, "A comprehensive review on feature set used for anaphora resolution. Artificial Intelligence Review," vol 54, pp 2917–3006 (2021).
- Narayana Potu, Chandrashekar Jatoth, Premchand Parvataneni "Optimizing resource scheduling based on extended particle swarm optimization in fog computing environments" pp.e6163, Doi: https://doi.org/10.1002/cpe.6163, Concurrency and Computation: Practice and Experience, Wiley,
- Varan Singh Rohila, Nitin Gupta, Amit Kaul and Deepak K Sharma, "Deep Learning Assisted Covid-19 Detection using full CT-scans", in Internet of Things, Elsevier, Feb 2021.
- Kirna Devi and Pamita Awasthi "Isoleucine with secondary sulfonamide functionality as anticancer, antibacterial and antifungal agents" * Accepted 17 Feb 2021, Published online: 11 Mar 2021 Journal of Biomolecular Structure and Dynamics Taylor and Francis https://doi.org/10.1080/07391102.2021.1893818
- Priyanka Sharma, Pamita Awasthi, "Synthesis, Characterization, In vivo, Molecular Docking, ADMET and HOMO-LUMO study of Juvenile Hormone Analogues having sulfonamide feature as an Insect Growth Regulators" Journal of Molecular Structure, 1231(2021)129945 https://doi.org/10.1016/j.molstruc.2021.129945 0022-2860/© 2021 Elsevier B.V
- Tanya Gupta, Samriti, J. Cho, Jai Prakash, "Hydrothermal synthesis of TiO2 nanorods: formation chemistry, growth mechanism, and tailoring of surface properties for photocatalytic activities," Materials Today Chemistry, vol. 20. 2021. (online).https://doi.org/10.1016/j.mtchem.2021.100428
- W. S. Fernandes-Junior, L. F. Zaccarin, G. Oliveira, P. R. de Oliveira, C. Kalinke, J. Alves Bonacin, Jai Prakash , and B. C. Janegitz, "Electrochemical sensor based on nanodiamonds and manioc starch for detection of tetracycline," Journal of sensors, vol. 2021, Article ID 6622612, 10 pages, 2021. https://doi.org/10.1155/2021/6622612.
- Sharma, S., Ghosh, K.S. (2021) Overview on recently reported fluorometric sensors for the detection of copper ion based on internal charge transfer (ICT), paramagnetic effect and aggregation induced emission (AIE) mechanisms, J. Mol. Struct. 1237, 130324.
- Sharma, S., Ghosh, K.S. (2021) Recent advances (2017-20) in the detection of copper ion by using fluorescence sensors working through transfer of photo-induced electron (PET), excited-state intramolecular proton (ESIPT) and Förster resonance energy (FRET), Spectrochimica Acta A 254, 119610.
- Kali Charan, Om Prakash Yadav, B. C. Tewari. "Charged anisotropic spherical collapse with heat flow." The European Physical Journal C 81.1 (2021): 1-11.
- Ankit Bajpai, Rajneesh Kumar, P. K. Sharma, Analysis of Wave Motion and Deformation in Elastic Plate Based on Two Temperature Theory of Thermoelasticity, Waves in Random and Complex Media (2021).
- V. Tiwari, "Relationship Among Technostress Productivity and Role Stress," Purushartha, vol 13, no. 1, pp. 67-83, 2020.
- V. Tiwari, "Countering Effects of Technostress on Productivity: Moderating Role of Proactive Personality," Benchmarking: an International Journal, Vol. 28 No. 2, pp. 636-651, 2020.
- Sudeb Majee, Subit K. Jain, Rajendra K. Ray, and Ananta K. Majee. "On the development of a coupled nonlinear telegraph-diffusion model for image restoration." Computers & Mathematics with Applications 80, no. 7 (2020): 1745-1766.
- M. Sadiq, M. Adil and J. Paul, "Does Social Influence Turn Pessimistic Consumers Green?", Business Strategy and the Environment, 2021. https://doi.org/10.1002/bse.2780
- M. Sadiq, M. Adil and J. Paul, "An innovation resistance theory perspective on purchase of eco-friendly cosmetics", Journal of Retailing and Consumer Services, 2021. https://doi.org/10.1016/j.jretconser.2020.102369
- M. Sadiq, and M. Adil, "Ecotourism related search for information over the internet: a technology acceptance model perspective", Journal of Ecotourim, 2021. https://doi.org/10.1080/14724049.2020.1785480.
- Sarmah, R., Dhiman, N., & Kanojia, H. (2021). Understanding intentions and actual use of mobile wallets by millennial: an extended TAM model perspective. Journal of Indian Business Research.
- International Journal of Work Innovation Influence of psychological capital on turnover intentions: empirical evidence from Indian paramedics.
- Gupta, A., Dhiman, N., Yousaf, A., & Arora, N. (2020). Social comparison and continuance intention of smart fitness wearables: an extended expectation confirmation theory perspective. Behaviour & Information Technology, 1-14.
- Joshi, R., & Garg, P. (2020). Assessing brand love, brand sacredness and brand fidelity towards halal brands. Journal of Islamic Marketing.
- Joshi, R., & Garg, P. (2021). Role of brand experience in shaping brand love. International Journal of Consumer Studies, 45(2), 259-272.

Journal Papers

- Kamboj, S. and Matharu, M. (2021), "Modelling the predictors of consumers' willingness to pay premium price for sustainable products", *Journal of Asian Business Studies*, Vol. ahead-of-print No. ahead-of-print, Accepted.
- Matharu, M., Jain., R and Kamboj, S. (2021), "Consumers' lifestyle of health and sustainability as determining factor of purchase behaviour for sustainable products: An empirical analysis", *Global Business and Economic Review*, Vol. ahead-of-print No. ahead-of-print, Accepted.
- Matharu, M., Jain, R. and Kamboj, S. (2020), "Understanding the impact of lifestyle on sustainable consumption behavior: a sharing economy perspective", *Management of Environmental Quality*, Vol. 32 No. 1, pp. 20-40.
- Kamboj, S., Rana, S., & Drave, V. A. (2020), "Factors Driving Consumer Engagement and Intentions with Gamification of Mobile Apps", *Journal of Electronic Commerce in Organizations*, Vol. 18 No. 2, pp. 17-35.
- Kamboj, S. and Joshi, R. (2020), "Examining the factors influencing smartphone apps use at tourism destinations: a UTAUT model perspective", *International Journal of Tourism Cities*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/IJTC-05-2020-0094.
- Behera, R. K., Gunasekaran, A., Gupta, S., Kamboj, S. and Bala, P. K. (2020), "Personalized digital marketing recommender engine", Journal of Retailing and Consumer Services, Vol. 53, pp. 101799.
- Kamboj, S. and Gupta, S (2020), "Use of smart phone apps in co-creative hotel service innovation: An evidence from India", Current Issues in Tourism, Vol. 23 No. 3, pp. 323-344.
- Himani Thakur, Rajesh Kumar Singh, and Arvind K. Gathania, "SYNTHESIS AND OPTICAL PROPERTIES OF GdVO4:Eu3+ PHOSPHOR" Materials Research Express,vol. 8, No.2 , 2021 . https://doi.org/10.1088/2053-1591/abe221.
- Himani Thakur, B. P. Singh, R. Kumar, Arvind K. Gathania, S.K. Singh, Rajesh Kumar Singh, " SYNTHESIS, STRUCTURAL ANALYSIS, UPCONVERSION LUMINESCENCE AND MAGNETIC PROPERTIES OF Ho3+/Yb3+ CO-DOPED GdVO4 NANOPHOSPHOR" Materials Chemistry and Physics, vol. 253,1st oct. 2020.
- Structural and optical studies of Mn2+ substituted CdO nano-particles, RKRK Leelavati, Applied Physics A, Materials Science & Processing 127 (4), 249.
- PriyaThakur, Vimal Sharma, NageshThakur; Study of energy release in Fe2O3/Al nano-thermite with graphene as an additional fuel; Physica B: condensed matter, doi.org/10.1016/j.physb.2020.412803.
- Sumit Bhardwaj, J.D.Sharma, Subhash Chand, K.K.Raina, RaviKumar, "Enhanced Electroactive Phases in Bi3·3La0·7Ti3O12-poly (vinylidene fluoride) composites with Improved Dielectric Properties", Solid State Communications, 2021, 326, 114176(11)
- P. Sadwal and A. Bage, "A COMPACT, LOWPASS AND DUAL BAND BANDPASS FILTER FOR MICROWAVE APPLICATION"Facta Universitatis, Series: Electronics and Energetics, Accepted.
- J. Talukdar, G. Rawat, B. Choudhuri, K. Singh, and K. Mummaneni, "Device Physics Based Analytical Modeling for Electrical Characteristics of Single Gate Extended Source Tunnel FET (SG-ESTFET)", Superlattices and Microstructures, Vol. 148, pp. 1-10, 2020.
- J. Talukdar, G. Rawat, K. Singh, and K. Mummaneni, "Low Frequency Noise Analysis of Single Gate Extended Source Tunnel FET", Silicon, 2020.
- Nithin Varma Malathkar, Surender Kumar Soni, "High compression efficiency image compression algorithm based on subsampling for capsule endoscopy", Multimedia Tools and Applications , pp. 1-13, 2021
- Singh P., Singhal A., Fatimah B., Gupta A., Joshi S.D., " AF-MNS: A Novel AM-FM Based Measure of Non-Stationarity", IEEE Communications Letters , 2020
- Singh, Pushpendra. "Novel generalized Fourier representations and phase transforms." Digital Signal Processing , vol. 106 pp. 102830, 2020.
- Mehla, Virender Kumar, Amit Singhal, and Pushpendra Singh. "A novel approach for automated alcoholism detection using Fourier decomposition method." Journal of Neuroscience Methods 346 (2020): 108945.
- Singh, Pushpendra, and Anubha Gupta. "Generalized SIR (GSIR) epidemic model: An improved framework for the predictive monitoring of COVID-19 pandemic." ISA transactions (2021).
- Marwaha, Puneeta, Ramesh Kumar Sunkaria, and Aman Kumar. "Suitability of multiscale entropy for complexity quantification of cardiac rhythms in chronic pathological conditions: a similarity patterns based investigation." Multimedia Tools and Applications 80.5 (2021): 7675-7686.
- Shree V., Nautiyal H., Goel V. (2021) Carbon Footprint Estimation for Academic Building in India. In: Muthu S.S. (eds) LCA Based Carbon Footprint Assessment. Environmental Footprints and Eco-design of Products and Processes. Springer, Singapore. https://doi.org/10.1007/978-981-33-4373-3_3
- Kapoor, Neetu & Bansal, Vijay. (2021). Spatial suitability assessment for planning infrastructure facilities at site level in hill areas. Journal of Urban Management. 10. 10.1016/j.jum.2021.02.003. http://dx.doi.org/10.1016/j.jum.2021.02.003.

Journal Papers

- Rajesh Sharma, "Wear volume prediction of AISI H13 die steel using response surface methodology and artificial neural network", Journal of Mechanical Engineering and Sciences, 2020.
- Jagota, V. and Sharma, R. K., Sehgal, R. (2021), "Impact of austenitizing temperature on the wear behaviour of AISI H13 steel" Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, Volume 235 Issue 3, pp. 564–574
- Rajiv Kumar Sharma, (2020), "Parametric optimization of process parameters for Electric discharge Machining of Tungsten carbide (93% WC and 7%Co)", Prod. Eng. Arch., vol. 26, no. 4, pp. 154–161, 2020, doi: 10.30657/pea.2020.26.28.
- Rajiv Kumar Sharma, (2021), "ISM and fuzzy logic approach to model and analyze the variables in downstream supply chain for perfect order fulfillment", Int. J. Qual. Reliab. Manag., 2021, doi: 10.1108/IJQRM-09-2020-0294.
- Rajiv Kumar Sharma, (2020), "The Relationship between Cost Leadership Competitive Strategy and Firm Performance: A Mediating Role of Quality Management", Journal of Manufacturing Technology Management.Rajiv Kumar Sharma, (2020), "An Efficient Algorithm for Solving Cell Formation Problem in Cellular Manufacturing", ISBN 978-981-15-4549-8
- Rajiv Kumar Sharma, (2020), "Analyzing the Effect of Different Maintenance Policies on the Performance of Flexible Manufacturing Cell", ISBM 978-981-15-6016-3, 483185_1_En (20).
- Somesh Kumar Sharma, (2020), "Assessment of Healthcare solid waste management practices for environmental performance: a study of hospitals in Himachal Pradesh", Management of Environmental Quality, Emerald Publishing Ltd., Accepted for Publication.
- Somesh Kumar Sharma, (2021), "SLS Process Parameters Optimization to improve Surface Quality and Accuracy of Polymer Parts", The International Journal of Manufacturing, Materials, and Mechanical Engineering, Accepted for Publication.
- Prashant Dhiman, (2020), "Photovoltaic Thermal Solar Air Heater under External Recycle: A Performance Study" Energy Sources-Elsevier.
- Pathak, S, Nayyar A, Varun Goel (2021)," Optimization of EGR effects on performance and emission parameters of a dual fuel (Diesel + CNG) CI engine: An experimental investigation, Fuel.
- R Kumar, Varun Goel, " Unconventional solar air heater with triangular flow-passage: A CFD based comparative performance assessment of different cross-sectional rib-roughnesses, Renewable Energy.
- A Singh, S Sinha, AK Choudhary, Deepak Sharma, H Panchal, KK Sadasivuni, An Experimental Investigation of Emission Performance of Heterogenous Catalyst Jatropha Biodiesel using RSM, Case Studies in Thermal Engineering, 2021.
- Medhat Elkelawy, E.A. El Shenawy, Salma khalaf Abd Almonem, M.H. Nasef, Hitesh Panchal, Hagar Alm-Eldin Bastawissi, Kishor Kumar Sadasivuni, Akhilesh Kumar Choudhary, Deepak Sharma, Mohammad Khalid, (2021), "Experimental study on combustion, performance, and emission behaviours of diesel /WCO biodiesel/Cyclohexane blends in DI-CI engine", Process Safety and Environmental Protection.
- A. Singh, J. Singh, Manoj Kumar Sinha, R. Kumar, V. Verma, (2021), "Compaction and Densification Characteristics of Iron Powder/Coal Fly Ash Mixtures Processed by Powder Metallurgy Technique". Journal of Materials Engineering and Performance, Vol. 30, 2021, 1-14.
- Rajesh Kumar, (2021) "Force fields for Atomistic-Scale Simulations: Materials and Applications".
- Laxmikant Yadav, (2020), "Performance analysis of counter flow cooling tower using reciprocating desiccant mesh", Berlin Heidelberg 2779-2799.
- Parnika Shrivastava, (2020), "Deformation-Induced Surface Roughness and Global Spring Back Resulted with Different Plastic Strain Levels in Incremental Forming of Original and Preheated Sheet Samples." Reliability and Risk Assessment in Engineering. Singapore, 2020. 457-466.
- Parnika Shrivastava, (2021), "Pseudospectral analysis and approximation of two-dimensional fractional cableequation". Mathematical Methods in the Applied Sciences.
- Parnika Shrivastava, (2021), "Time–space Jacobi pseudospectral simulation of multidimensional Schrödinger equation". Numerical Methods for Partial Differential Equations 37, 2.
- A Kumar, L Manohar, Imidazolium functionalized polymers for effective electrochemical reduction of CO2, Journal of Polymer Engineering, 41 (3), 211-217 (2021).

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
1	Automatic Voltage Regulator with Particle Swarm Optimized Model Predictive Control Startegy	Scopus	2020	V. Kumar, V. Sharma
2	An Improved Infrared Thermography Techique for Hotspot Temperature, Per Unit Life and Aging Accelerating Factor Computation in Transformers	Scopus	2020	M. Sahu, S. R. Sharma, A. Singh, R. Kumar and Y. R. Sood
3	Identifying Transformer Oil Criticality Using Fuzzy Logic Approach	Scopus	2020	L. Gautam, R. Kumar and Y. R. Sood
4	Techno-economic Assessments of Green Hybrid Microgrid	Scopus	2020	Sharma S., Sood Y.R., Maheshwari A.
5	Optimal Power Flow and Its Validation for Deregulated Power Sector	Scopus	2020	Ankur Maheshwari, Y.R. Sood, Sumit Sharma, Naveen Kuma
6	Optimal Planning of Green Hybrid Microgrid in Power Industry	Scopus	2020	Sumit Sharma, Y.R. Sood, Ankur Maheshwari, Naveen Kumar Sharma
7	Techno economic Feasibility and Sensitivity Analysis of Off Grid Hybrid Energy System	Scopus	2020	Sumit Sharma, Y.R. Sood, Ankur Maheshwari, Naveen Kumar Sharma
8	Open Access Same Time Information System : Extended to Indian Power Market	Scopus	2020	Nivedita Singh, Y.R Sood
9	Open Access Same Time Information System (OASIS) of New York	Scopus	2020	Chandransh Singh, Y.R Sood
10	Modified IMC for Automatic Voltage Regulator via Order Reduction Techniques	Scopus	2020	Rishabh Verma, Anil Kumar Yadav, Pawan Kumar Pathak
11	Trust Aware Scheme based Malicious Nodes Detection under Cooperative Spectrum Sensing for Cognitive Radio Networks", 2021 ACM International Conference on Distributed Computing and Networking (ICDCN '21), Nara, Japan. (Scopus)	Scopus	2021	Abhishek Kumar, Nitin Gupta, Riya, and Jagdeep Singh
12	Heart Disease Prediction Using Hybrid Classi-fication Methods, International Conference on Innovative Computing and Communication, published in Springer AISC.	Scopus	2021	Aniket Bharadwaj, Divakar Yadav, Arun Kumar Yadav,
13	Age Group Prediction on Textual Data using Sentiment Analysis, DSAI 2020, , Online, Portugal, published in ACM digital library.	Scopus	2020	Aarushi, Saumya Asati, Nikhil, Divakar Yadav, and Arun kr Yadav
14	Semantic Analysis of Chest X-ray using an Attention-based CNN Technique, 3rd International Conference on Advanced Computing & Software Engineering ICAC, SE-2021.	Scopus	2021	Rishabh Dhenkawat, Snehal Saini, Nagendra Pradap Singh
15	Free Vibration Analysis of Generalized Thermoelastic Homogeneous Isotropic plate with Two Temperatures	Scopus	2020	Ankit Bajpai, P. K. Sharma
16	Impacts of Two Temperature and Temperature-Dependent Material Properties on Thermoelastic Diffusion Plate	Scopus	2020	Ankit Bajpai, P. K. Sharma
17	Impacts of Two-Temperature on a Generalized Thermoelastic Plate with Thermal Loading	Scopus	2020	Ankit Bajpai, P. K. Sharma
18	Influence of Brand Sacredness and Fidelity on Brand Advocacy: an Extended Approach to Triangular Theory of Love, paper presented at 04th International Conference on Marketing, Technology, and Society", 7-9 December, Indian Institute of Management Kozhikode, Kerala, India.		2020	Joshi, R and Kamboj S.

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
19.	Role of aluminium and MWCNT as a fuel in MoO3 based nanothermite AIP Conference Proceedings 2220, 120010 (2020).	SCI	2020	Vimal Sharma. Priya Thakur, Nagesh Thakur
20.	"Compact Circularly Polarized Patch Antenna for 5G Applications." In 2020 IEEE 7th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), pp. 1-5. IEEE, 2020.		2020	Verma, Rajan, and Saurabh Kumar.
21.	Miniaturized Broadband Circularly Polarized Slotted Ground Antenna with L-shaped Parasitic Strips, In 2020 IEEE 7th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON) (pp. 1-6). IEEE.		2020	N. Singh, S. Kumar
22.	A Novel Approach to classify ECG Signal using Deep Learning		2021	Aman Kumar, Mohit Sipani and Puneeta Marwaha
23.	Exploring Sustainable Dwellings of Rural Maharashtra: "Transformation of Traditional Architecture to Contemporary Evolution". International Conference on Architecture and Beyond 25-26th March, 2021. School of Architecture. Coimbatore.		2021	Kawale,A., & Kaur, A.
24.	Performance analysis of solar air Heater with jet impingement and corrugated absorber plate, ICCACE -2020 NIT Kurukshetra		2020	Dr. Prashant Dhiman
25.	Numerical Investigation of Heat Transfer Characteristics of Al2O3-H2O Based Nanofluid Flow in Light Water Nuclear Reactor RAME-2020 (2nd International Conference on Recent Advances in Mechanical Engineering), Delhi Technological University, Delhi, India, 2020.		2020	Dr. Deepak Sharma
26.	Numerical study of hydrodynamics and heat transfer characteristics during cooling of curve surface with water jet impingement i-CONECTS-2021: International Conference on Energy Conversion and Thermo-Fluids System, Malaviya National Institute of Technology Jaipur, Jaipur India		2021	Dr. Ajoy Debberma
27.	Performance Investigation of Sinusoidal Corrugated Absorber Plate Solar Air Heater FLUTE 2021: International Symposium on Fluids and Thermal Engineering, Department of Mechanical Engineering, Amity University, Noida, India		2021	Dr. Ajoy Debberma
28.	CFD Investigation on Rewetting temperature and Wetting delay during quenching of hot Surface with Jet Impingement ICAMIE-2020: International Online Conference on Advances in Mechanical and Industrial Engineering,Virtual Conference, Bhubaneswar, India		2020	Dr. Ajoy Debberma

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
29.	CFD Ivestigation of Rewetting behavior on a hot vertical plate surface with coolant jet impingement 3rd International e-Conference on Frontiers in Mechanical Engineering and nano Technology [ICFMET-2020], Sanjeevan Engineering and Technology Institute, Panhala and Yashwantrao Patil Science College, Solankur (Technical Sponsor - Association of Science and Technology)		2020	Dr. Ajoy Debberma
30.	Design and Development of Novel Multipoint Epicyclic Superfinishing Tool Industrial and Manufacturing Systems (CIMS-2020), October 09-11, 2020, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar		2020	Dr. Dilshad A Khan
31.	A thermodynamic analysis on liquid-crystal phase transition in supercooled SW-Silicon.	SCI	2020	Arvind K. Gautam
32.	Thermodynamic and Structural Analysis on Monatomic (mW) Water in Supercooled region	Scopus	2021	Arvind K. Gautam

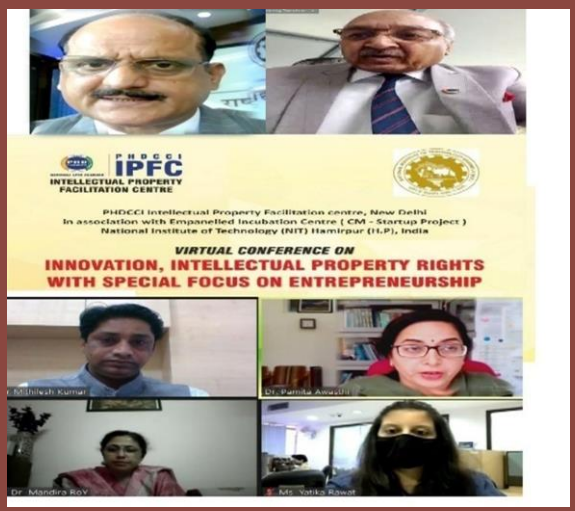
National / International Conference organized

A two days national conference on the theme- Recent Trends in Management and Social Sciences (RTMSS 2021) RTMSS 2021 was organized by the Department of Management Studies & Dept. Of HSS from 5th March 2021 to 6th March 2021 on the topic of –"Recent trends in Management and Social Sciences". The Inaugural session was from 10 am onwards on 5th March 2021 with introductory speech by Dr. Richa Joshi & Dr. Sachin Kumar. The chief guest Prof. (Dr.) Lalit Kumar Awasthi, Director, NIT Hamirpur: the guest of honour Prof. M.M Sharma, MNIT, Jaipur &Prof. (Dr.) Piar Chand, Head Department of Management Studies were felicitated. They addressed the participants with words of wisdom & iterated the relevance of integrating management in every field of knowledge. Also, an e-Book of selected research papers with ISBN number was released in the inaugural ceremony.

Workshops / Webinars conducted

The e-workshop was organized w.e.f. 28/12/2020 to 01/01/2021 with an aim aim to brain storm the students to become innovators and think about setting up the enterprise firms. In total 17 speakers including 11 external speakers and 2 Entrepreneurs (Alumni) from various parts of the country interacted with the participants of the e-workshop. In the inaugural speech, Prof. Awasthi highlighted the need of hour to take up challenges in making India "Atamnirbhar Bharat" in line with the initiative of the PM and called on the faculty to be part of this initiative. Prof. Awasthi highlighted that the Institute is planning to earmark 1% Fund of the annual budget of the Institute towards innovation and Entrepreneurship Fund which will help the students to take up innovative projects based on societal needs, he also shared that the Institute will also help and finance the innovators in filing of the patents. He suggested the students to become job creators rather than jobseekers. He also stressed the need to facilitate the students towards taking up Startup activity and organizing events related to startup. He urged the students to visit a startup company and interact with the incubators.

Virtual Conference on Innovation, Intellectual Property rights with special focus on Entrepreneurship organised by PHDCCI Intellectual Property Facilitation centre, New Delhi in Association with Empannelled Incubation Centre (CM-Startup Project) National Institute of Technology, Hamirpur (HP). In this conference Total 333 participants were registered.



A Toys Innovation Challenge / workshop on the topic "Manufacturing local innovative toys/video games in local languages" was organized by Incubation Centre , NIT, Hamirpur(HP) conducted through google meet on 25th Feb. 2021. In this workshop total 22 Teams applied out of which 16 were shortlisted for presentation. Out of 16 shortlisted Teams 5 Teams are declared winner.

Workshops / Webinars conducted

e_Workshop on "Socio-ecological Resilience in Hills" was Organized by Department of Architecture, NIT Hamirpur (HP) from 18- 22 Dec., 2020. The course was second Professional development program in the resilience PDP series of five workshop/ program to be conducted in next one-year duration. Centre for Urban and Regional Excellence, (CURE), New Delhi was also part of the course and coordinated for dissemination of resilience through their resource persons and expert lectures.

There a need to develop and construct a group of experts in the field of community Resilience in hill state due to high vulnerability index. Increased frequency of natural hazards is one of the impacts of climate change in India. Marginalized urban settlements are often vulnerable to such disaster due to their location in hazardous areas and the use of non-durable building materials. In this context, there is an urgent need for paradigmatic shift in the education of graduate students in spatial planning and design as well as training of urban professionals from different backgrounds in order to confront upcoming challenges related to Socio-ecological Resilience in hill settlements.

In total 127 no. of participants registered for the e_workshop. The participants were mainly Professionals, academicians and Students.

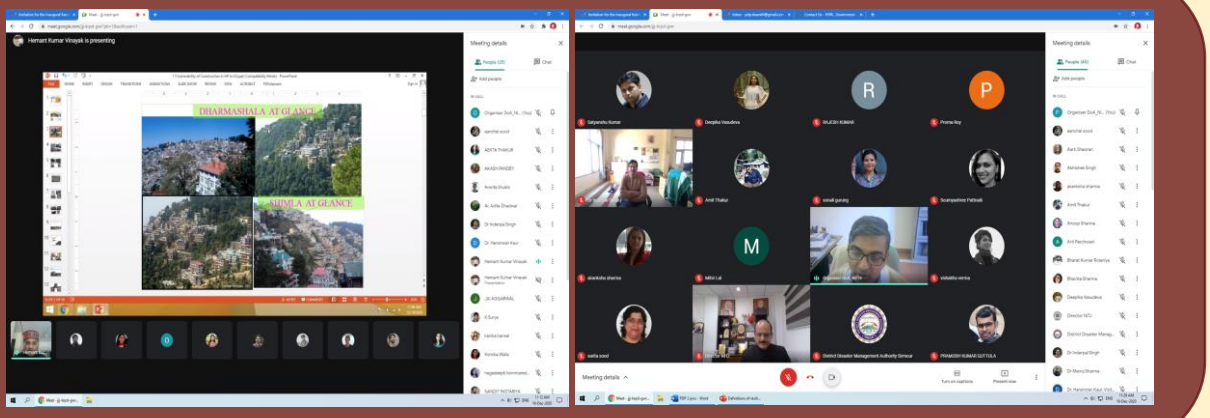
The course focused on:

- Understanding the fundament of social ecological resilience and related risk
- Risk assessment and vulnerability in Hills
- Role of Watershed Management in Social ecological resilience

Site Visit: Virtual Site Visit to Dharamshala on 21st Dec., 2020 coordinated by Centre for Urban and Regional Excellence (CURE)

Instructors:

- Dr. Inderpal Singh, Dr. Aniket Sharma, Dr. Puneet Sharma, Dr. S S Katoch, Dr. Manoj Sharma (NIT Hamirpur)
- Dr. Barsha Poricha, Sh. Sidharth Snankar (CURE)
- Dr. Navneet Yadav (dores)
- Ar. Ajay Sharma (SJVN)
- Dr. Hemant K Vinayak (NITTR Chandigarh)
- Dr. SS Randhawa (HP State Council for Environment, Science and Technology, Shimla)
- Dr. Pravesh Kr. Sharma (HIPA, Shimla)



Five days e-workshop on 'ECBC Training Program on Whole Building Performance Simulation Method' from 21st – 25th Dec. 2020

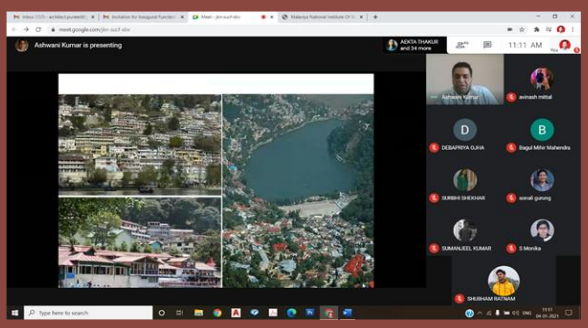
Workshops / Webinars conducted

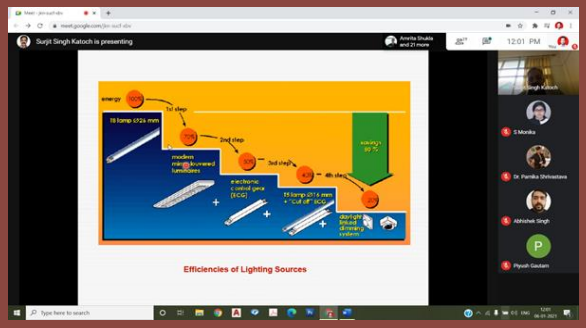
Five days e-workshop on 'Energy Efficient Building Technology (EEBT-2021)' from 3rd – 7th January, 2021

A multidisciplinary e_STC on Energy Efficient Building Technology (EEBT-2021) was conducted by Department of Mechanical engineering and Department of Architecture in collaboration from 3rd Jan. to 7th Jan. 2021. Please find enclosed the final report of e-STC.

The event was a collaborative effort of Department of mechanical engineering and department of architecture. The first e-STC for the year 2021 had come with unique idea to design efficient buildings by minimising energy requirement. Convener/coordinator of the STC, Dr. Debashish Das, Dr. Puneet Sharma and Dr. Parnika Shrivastava susses fully conducted the e-STC under the guidance of Dr. Somesh Sharma, Head DoME and our worthy Director sir, Prof. Lalit Kumar Awasthi. The two departments have taken up such joint venture after a period of ten years indicating that the positive energy among the faculty members for societal contribution is remotivated. The course was designed to fulfil the needs of upcoming new engineers and architect to work in collaborative manner in the practical field.

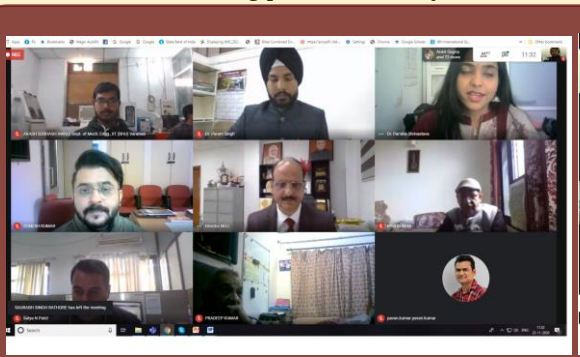
Resource persons from the field of Climatic responsive architecture, Wind energy, Air conditioning, Urban planning and Energy efficiency shared their expertise with the participants during the event. This multidisciplinary workshop is an initiative of new collaborative and innovative approach for energy efficient building technology for sustainable development under the guidance of Director, Prof. Lalit Kr. Awasthi. During the inaugural ceremony Prof. Lalit Kr. Awasthi expressed the need of smart energy solutions for buildings. He also shared his view among the participant regarding his masterplan for making this institute buildings as energy efficient structures.

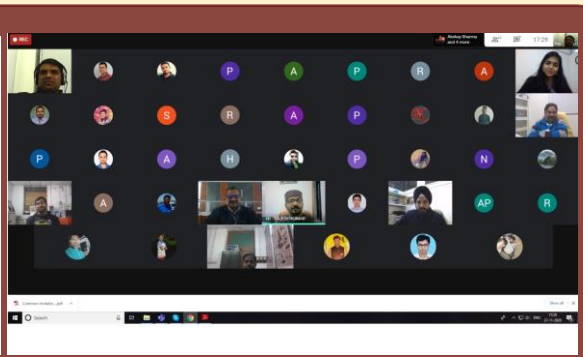




Five Days Online Workshop on ADVANCES IN MANUFACTURING: MATERIALS, PROCESSES & SYSTEMS (AMMPS -2020) during November 23-27, 2020

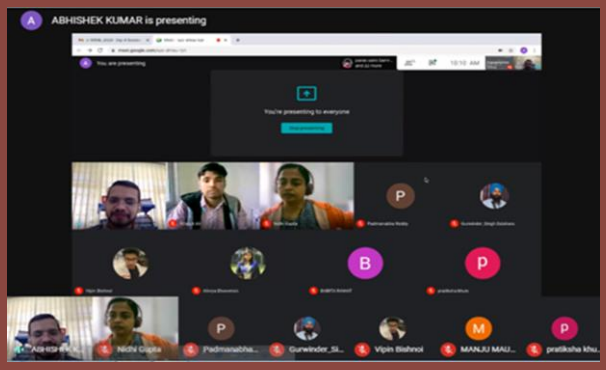
Manufacturing science is the key domain of Mechanical Engineering. Quite often, the level of manufacturing reflects the ability to adopt the new and upcoming industrial needs. Growth of a country primarily depends on the strength of the manufacturing sectors. Generally, manufacturing consists of materials, processes and systems, which play critical role in a product realization. The prime objective of this workshop is to impart the comprehensive knowledge of recent advances and developments in the field of materials, manufacturing and processes. This workshop will certainly enfold the three mutually dependent realms to cater the needs of manufacturing industries and to enable the participants to address various upcoming issues and challenges related to materials, manufacturing processes and systems.





Workshops / Webinars conducted

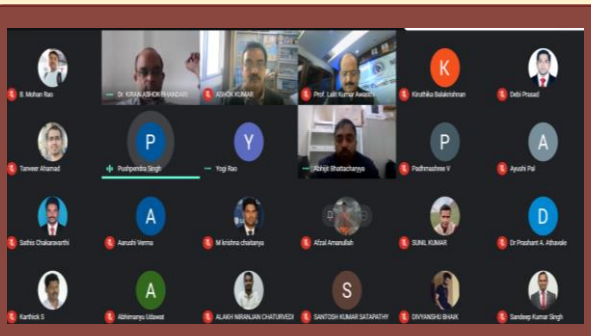
The e-Workshop on Mathematical and Statistical Methods for Machine Learning (MSML 2020) started on November 7, 2020 at 10:30AM through Google meet. In the inaugural function honourable Director Prof. (Dr.) Lalit Kumar Awasthi, as a Chief Guest, Prof. Uma Shanker Tiwary, IIIT Allahabad as Guest of Honor, Prof. YD Sharma, Head of the Department, Dr. Pawan Kumar Sharma as Convener, Dr. Nidhi Gupta and Dr. Rifaqat Ali as Coordinators were present along with participants from all over India and audience from other department of NIT Hamirpur. The sessions were taken by experts in the field of Machine Learning and Artificial Intelligence along with demonstrative lectures. Five days workshop was quite informative and beneficial for the researchers and enthusiastic learners in the field. The event was conducted aimed to explore mathematics behind Machine Learning as well Artificial Intelligence smart technologies. It was an successful event and appreciated by participants.

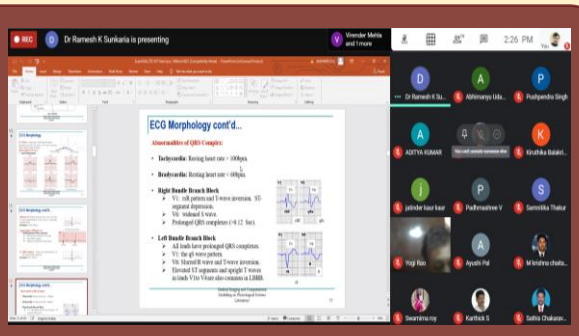


e-workshop on Quality Research and Scholarly Publications in Social Sciences from 18 January 2021 to 22 January 2021. The experts were from different reputed Institutions of India like IIT, IIM, IIIT and Universities. On day one Prof. P. Vigneswara, IIT Delhi took the session and briefed the participants about how to apply for research grant. The second session was taken by Dr. Hemantkumar, SVNIT Surat on Case Study Research, Session 3 was taken by Dr. Satish Kumar, MNIT Jaipur on Bibliometric analysis. On day 2 Art of research was discussed by Dr. Satish Kumar, MNIT Jaipur, Quality Research by Dr. Jogendra Kumar Nayak IIT Roorkee, Commnicating Resaerch papers by Dr. Arpan Kumar Kar, IIT delhi, Teaching with cases by Dr. Suresh Kumar, IIM Lucknow. On day 3 Writing scholarly artciles by Prof. Rangnekar, IIT roorkee, Effective Case Study, Dr. Sanjeev Tripathi, IIM Indore, Quality Research by Propf. Rajender Kumar.On day 4 Scaling Techniques by Prof. Krishna NERIST Arunachal Pradesh, Plagiarism by Damodar Suar, IIT Kharagpur, Questionnaire designing, Prof. Pia Chand, NIT hamirpur was deliverd. On day 5 Prof. Kishor Goswami IIT Kharagpur, Dr. Ramesh IIT Roorkee, Dr. Lalit Kumar Awasthi NIT Hamirpu delived expert talk.

To present the fundamentals of signal processing and machine learning.

- To present the concept of time, frequency, and time-frequency domain signal analysis.
- To discuss the advancement in the area of wavelet based signal processing.
- To provide a solid foundation of the use of machine learning techniques in signal classification.





Workshops / Webinars conducted

An online seminar on "Current and future Scope of Entrepreneurship in Chemical Engineering (CFSECE-2021)" was organized by the Department of Chemical Engineering, NIT Hamirpur (H.P.) on 30st January 2021. Honourable Prof. Lalit Kumar Awasthi, Director, NIT Hamirpur graced the inaugural session as Chief Guest and Dr Sandip patil,Founder/Director of E-Spin Nanotech Pvt. Ltd. as the Guest of Honour. Dr. Tapas Palai, Chairman & Convener (CFSECE-2021) & Head, Chemical Engineering Department; Dr. Arvind K. Gautam & Dr. Rahul Saha, Coordinator also addressed the gatherings.

The main objective of this online seminar was to provide industrial and research exposure in the field of chemical engineering. The event wias able to assist in exploring ideas and related information towards research and entrepreneurship. Moreover, the participants received all the important and useful information related to some specific topics, which they can apply for their future improvement in their working field. The seminar also covered some of the important aspects and challenges face by a beginner as an entrepreneur during his/her journey with solutions to overcome the challenges. Further, this seminar was an opportunity for all the participants to get new ideas and the idea for industrial requirement to set-up a small and large scale business. Along with all the possible industrial and research opportunity in all the related field of chemical engineering. Overall this Seminar was an opportunity for the UG/PG students from their future prospective.

e-STC on Advanced Statistical Techniques for Research in Social Sciences from 26 October to 30 October.

The experts were from different reputed Institutions of India like IIT, IIM, IIIT and Universities.

On day one Dr. HK Dangi, Delhi University took the session and briefed the participants about introduction to Research methodology. The second session was taken by Dr Yatish Joshi, MNIT Allahabad on Sentiment analysis. Dr. Richa Joshi NIT Hamirpur delivered a talk on data preparation, cleaning etc.

On day 2 Factor analysis was explained by Dr. Vikas Kumar IIM Sirmaur, Cluster analysis by Dr. Amit Shankar IIM VIZAG, CFA by Dr. Shampy Kamboj, NIT Hamirpur.

On day 3, a session on SEM Basics and second order model was taken by Dr. HK Dangi, Delhi University, Expert talk on Research Methodology by Prof. S. Rangnekar, IIT Roorkee, Publication in Scopus journals by Dr. Shampy Kamboj, NIT Hamirpur and text mining by by Dr. Amit Shankar IIM VIZAG.

On day 4 Dr. Amit Shankar IIM VIZAG took a session on Decision Tree and conjoint analysis, followed by Bibliometric analysis using R Studio by Dr. Sachin Kumar NIT Hamirpur, Ethicak Issues in Research by Dr. Shikha N Khera DTU.

On day 5 Dr. Vinod Kumar Mehta IIIT Lucknow took a session on Literature Review. After that Dr. Vikas Kumar Explained Mediation and Moderation analysis.

Workshops / Webinars conducted

Online Workshop on "FRONTIERS IN SUSTAINABLE CHEMICAL PROCESSES (FSCP-2021)" was organized by Department: Chemical Engineering, NIT Hamirpur from February 1-5, 2021

The e-Workshop was infused with detailed designing aspects and recent advancements in the chemical and allied process industries. It had sessions on Process Designing of various Chemical Processes in which various facets of process intensification and energy integration have been covered. This workshop was helpful for undergraduate & post graduate students, Ph.D. research scholars, faculties and working professionals in process industries to conceptualize the designing aspects and translating them to actual industrial practices.

The course started with formal inauguration ceremony with Chief Guest Prof. Piar Chand, Campus In-Charge (NIT Hamirpur), Guest of Honor Prof. Ravindra D Gudi, Professor, Department of Chemical Engineering (IIT Bombay) and Chairman Dr. Tapas Palai, Head, Department of Chemical Engineering. Prof. Piar Chand and Prof. Ravindra D Gudi emphasised on the use of sustainable technologies in chemical industries and highlighted the major challenges faced by chemical industries.

Dr. Amol Deshpande from BITS Pilani Goa Campus delivered an expert talk cum demonstration on "Process Designing using Aspen PLUS". On day one, participants were introduced to Aspen PLUS and were taught of basics of Aspen using different case studies.

Prof. Parag Gogate from ICT Mumbai delivered a talk on "Process Intensification of Chemical Processing Applications using Cavitational Reactors".

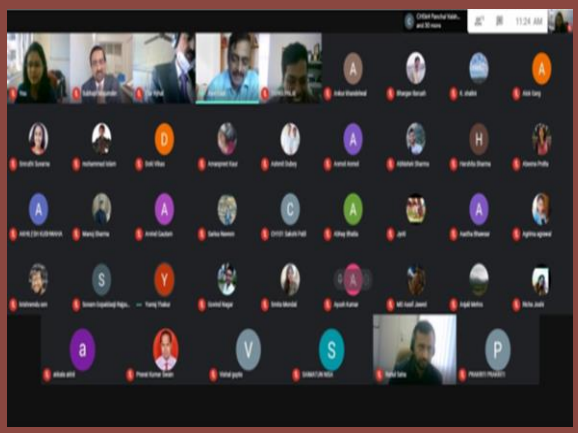
On day 2 Eminent speakers from IIT Bombay and MNIT Jaipur have given expert talk on sustainable chemical processes. Dr. Dipaloy Datta from MNIT Jaipur emphasised on "Reactive Extraction" which is considered as an intensified separation process. Prof. Ravindra D Gudi from IIT Bombay discussed about "Green Engineering".

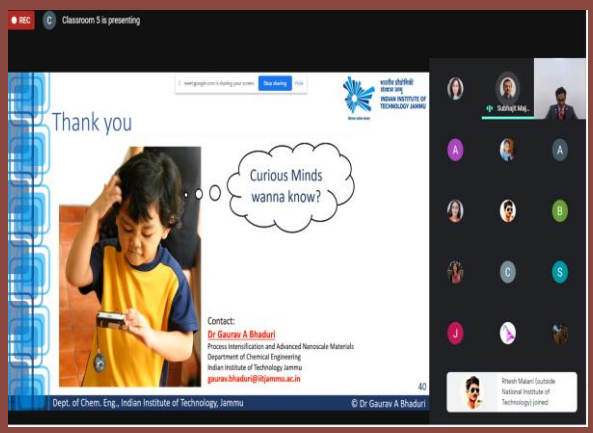
On day 3, professional from industry and faculties from IIT Guwahati and IIT Jammu have delivered talk on oil and gas production engineering, sustainable bio-fuel production and process intensification in chemical industries respectively.

On day 4, Prof. Abhishek Sharma from MU Jaipur delivered a talk on Integrated Technologies for Economically Sustainable Bio-based Energy in which participants were exposed to various integrated technologies used for the production of bio-based energy. Dr. Ranjan Phukan from Dibrugarh University discussed about chemical mechanisms of hybrid water flooding processes in oil reservoirs.

On day 5, participants were taught about the thermo-catalytic processes for biomass conversion to biofuels by Dr. Thallada Bhaskar (IIP Dehradun) and followed by micro reactor for process intensification by Dr. Raghvendra Gupta (IIT Guwahati).

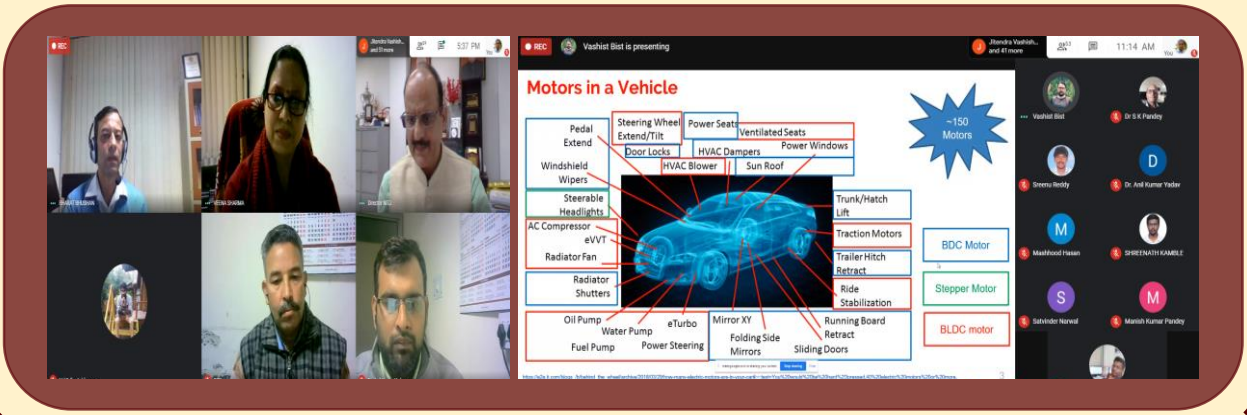
The course formally ended with valedictory function. Participants gave their valuable feedbacks which includes the organizing of more workshops like this in future.





Short Term Courses conducted

The five days online Short Term Course on "Advancements in Optimization of Power Generation, Drives and Control System" was conducted by the Department of Electrical Engineering, National Institute of Technology Hamirpur (H.P.) from 16th to 20th November 2020. The online STC was coordinated by Dr. Rajan Kumar and Dr. Anil Kumar Yadav. The objective of the e-STC was to bring the researchers and academic experts from reputed institutes of our country to a collective gathering for exchanging and sharing knowledge about the advancements in optimization of renewable power generation using drives and control system. The theme of this e-STC fulfilled the goal of providing exposure to both conventional and advanced controllers along with optimization of power generation using drives. The online STC was inaugurated by Patron and Chief Guest of the program Prof. (Dr.) Lalit Kumar Awasthi, Director NIT Hamirpur. Prior to his address, a brief of Departmental achievements from Chairperson of the e-STC Dr. (Mrs.) Veena Sharma, Head, DoEE and introductory note about sessions from Convener of the program Dr. B. B. Sharma were given to the participants. The program witnessed a huge participation from around the globe having total 94 participants from different institutes and industries. Total 10 technical sessions were conducted in five days. The valedictory program was graced by the presence of Prof. (Dr.) Lalit Kumar Awasthi, Director NIT Hamirpur. With the closing speech of director, the feedbacks from several participants and the vote of thanks from the e-STC coordinators, the program was concluded.

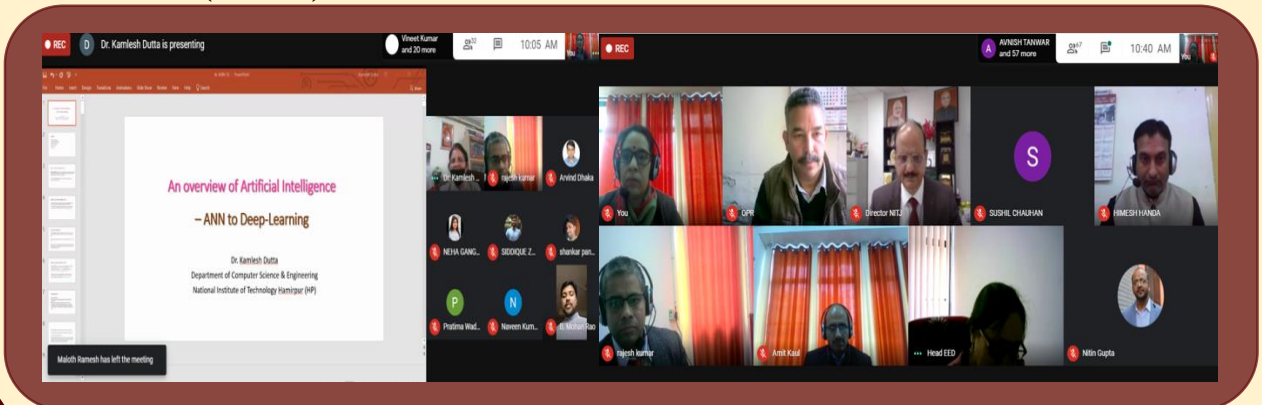


The e-STC conducted w.e.f. 23/11/020 to 27/11/2020 with an aim to provide the participants an in-depth understanding of most popular softwares/tools used for research and allied activities. The following were the objectives:

- To apprise participants about latest Artificial Intelligence (AI) and Machine Learning (ML) techniques.
- To discuss application of AI & ML techniques using various computing softwares.
- To give hands-on experience to the participants and provide platform share their experiences and knowledge.

Convener: Dr. Amit Kaul

Course Coordinator(s):
Mr. Rajesh Kumar (A.P EED)
Ms. Bharti Koul (A.P EED)

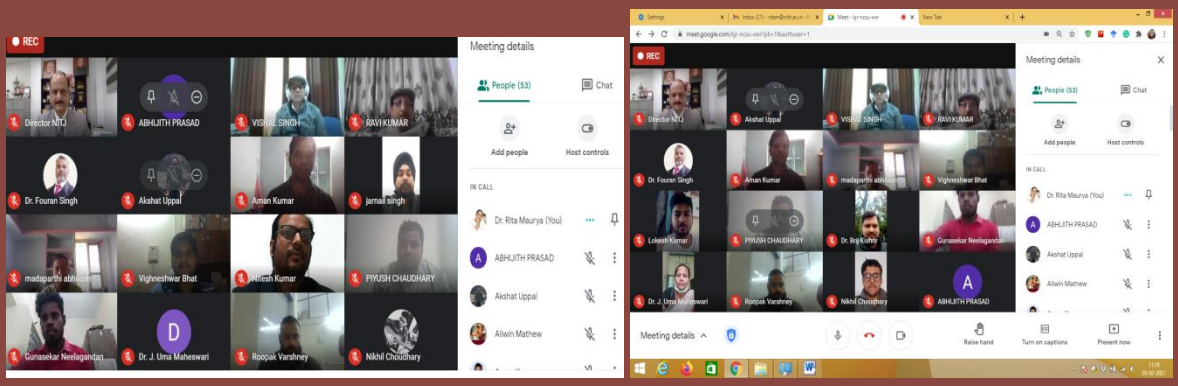


Short Term Courses conducted

New Generation Functional Materials and Their Applications (NFMA-2021): Functional materials have drawn interest for researchers belonging to several branches of science and engineering like Physics, Chemistry, Chemical engineering, Electronics engineering and Materials Science and Engineering. This e- STC covers a wide spectrum of applications of functional materials such as electronics, healthcare, environment and energy. Thus, it will be extremely beneficial for all the faculties, students and research scholars working in several interdisciplinary areas of science and engineering.

Objectives and Scope

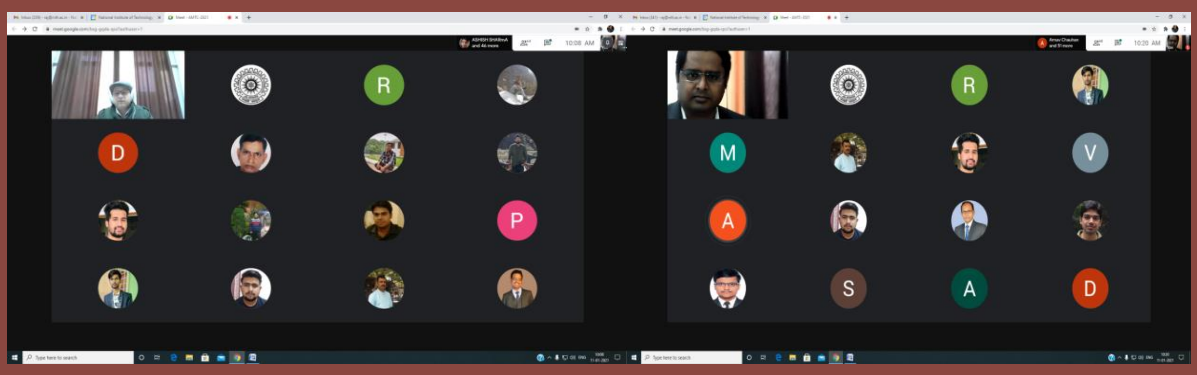
- To provide a common platform for interaction with the experts from various academic institutions, research labs and industries.
- To facilitate exposure of state of the art technologies and developments in the area of functional materials to future researchers/entrepreneurs/ students from interdisciplinary fields of science and engineering.



Advanced Materials Testing and Characterization (AMTC-2021):This e-Workshop was organized in line to the theme of providing a platform to expose the participants to the current and future challenges with their possible solutions along with brushing up the fundamentals of materials testing and characterization aspects. Lectures, exhaustive discussion, mutual interaction and idea sharing were certainly opened an avenue to take a leap in the direction of mitigating the ongoing and future industrial needs in scientific ways.

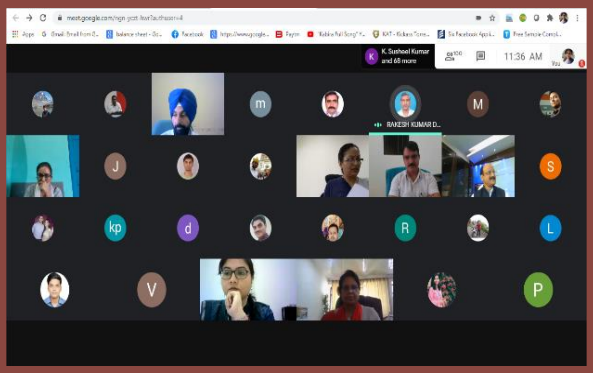
Objectives and Scope

Materials testing and characterization is the key domain of Metallurgical and Materials Engineering. Quite often, the level of materials testing and characterization reflects the ability to adopt the new and upcoming industrial needs. Growth of a country primarily depends on the strength of developing new and advanced materials, which influence the automobile, aerospace, manufacturing and construction sectors. The prime objective of this workshop was to impart the comprehensive knowledge of advanced testing and characterization of metals and alloys along with special materials. This workshop was certainly enfolded the three mutually dependent realms to cater the needs of metallurgical and materials industries and to enable the participants to address various upcoming issues and challenges related to materials and its testing and characterization



Short Term Courses conducted

Department of Computer Science and Engineering, NIT Hamirpur organized a e-short term course on Machine Learning for Natural Language Processing (MNLP- 2020) from 12-17 October, 2020. Distinguished academicians, practitioners, young faculty members, research scholars, and students were invited to participate in MNLP-2020. The e-STC aims to provide an excellent opportunity for participants to decide possible research directions. Analyzing the text data is a part of Natural Language Processing (NLP). NLP is a field in Artificial Intelligence enabling computers to understand natural (human) language. There were total 18 sessions given by 16 speakers in the e-STC. The e-STC was attended by 172 participants from all over India and overseas as well. The e-STC helped graduate students, post-graduates, research scholars, Ph.D. scholars, and few attendees from industries. Dr. (Mrs.) Kamlesh Dutta, Associate Professor, DoCSE, was the convener, Dr. Pardeep Singh and Dr Jyoti Srivastva, Assistant Professors, DoCSE were the co-ordinators of the e-short term course.

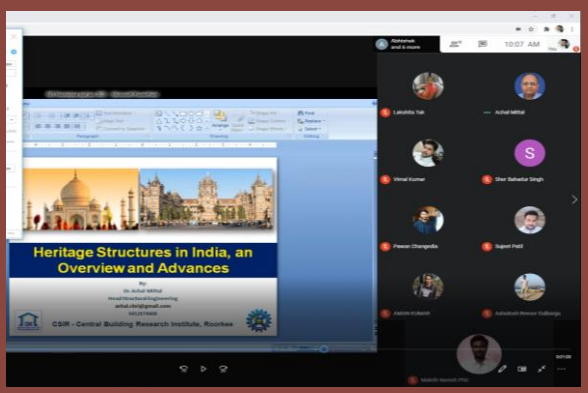


Online Short Term Course (e-STC) On Advances in Structural Engineering (ASE-2021) From January 11-15, 2021

The primary aim of this e-STC was to enhance technical and professional competency as well as organizing skills of the participants in the field of structural engineering. The course encouraged the participants to interact with professionals working in specific areas of research in Academic Institutions, Research Labs, and Industries.

The series of lectures covered in this course are composite structures; performance of prestressed and reinforced concrete against impact loading; ballistic response of concrete targets; corrosion in metallic structures; seismic behavior of structures; structural reliability; corrosion on steel, emerging technologies in the construction, advanced techniques in retrofitting of heritage structures in india, advanced concrete technology etc. All the lectures were very informative and full of knowledge. In the course, the participants were educated with most advanced technologies in the field of structural engineering. The course would be very much helpful for the participants who are at the beginning of their research career and those who are at their middle level of research. The course will motivate and inspire the participants to work in the advanced field of structural engineering.

In the program, a total 38 participants enrolled and a feedback form (online) was given to them and the responses were received. The participants felt that the lectures were resourceful and the presentations were delivered in a comprehensive manner. They found that the program was coordinated well and requested to organize such events in future also.



Short Term Courses conducted

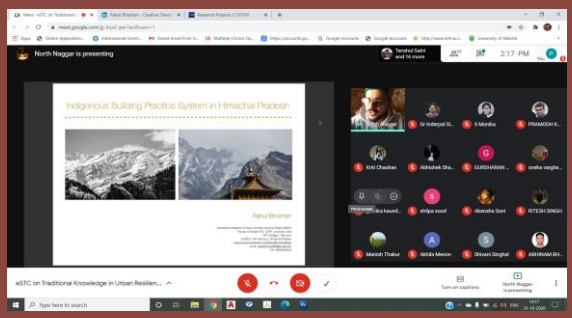
Five days e-STC on 'Traditional Knowledge in Urban Resilience' from 28th Oct. – 1st Nov. 2020

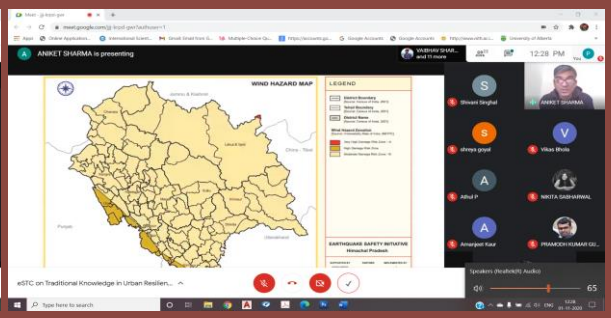
This course shall pave the way to explore the traditional wisdoms and best practices in the context of resilience which can be applied in contemporary world with respect to adaptation to disasters and climate change with a focus on built environment. Indigenous knowledge is often evolved on the principles of trial and error, which is then followed in mainstream sciences. On the contrary, modern planned settlements that are based on man-made scientific interventions are designed to deal with resilience towards calamities. However, in hilly terrains, we often find that rampant, unregulated and accelerated modern urbanisation techniques has led to new urban fabric that is inorganic in nature and not tolerant to environmental requirements of a hilly region. This has led to incidences of frequent landslides, flash floods and large-scale losses during earthquakes. This course will explore resilient and sustainable techniques in the build environment within the context of hilly settlements. Given the significance of rich local indigenous knowledge, the course critically evaluates the traditional construction techniques, skills and knowledge prevalent amongst the local communities in north-western part of Himachal Pradesh region.

Site Visit: Site Visit to Dharamshala on November 1, 2020 coordinated by Centre for Urban and Regional Excellence (CURE)

Instructors:

- Dr. Inderpal Singh, Dr. Aniket Sharma, Dr. Puneet Sharma (NIT Hamirpur)
- Dr. Minakshi Jain, Dr. Adinarayane R (SPA Vijayawada)
- Dr. Barsha Poricha (CURE), Ar. Surinder Bahga (SAAKAAR)
- Dr. Pravesh Kr. Sharma (HIPA, Shimla)
- Ar. Rahul Bhushan (Sustainable Architecture)





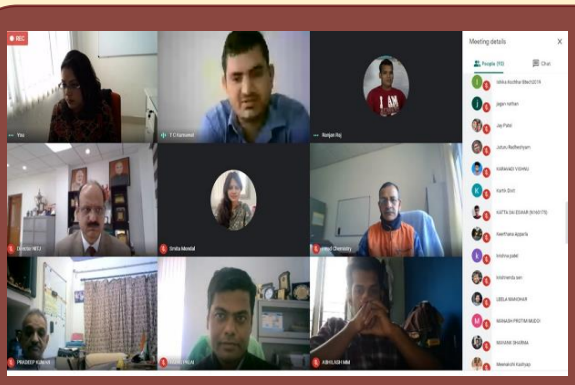
A short term course on "Advanced Research Trends in Chemical Engineering (ARTCE-2020)" was organized by the Department of Chemical Engineering, NIT Hamirpur (H.P.) during October 28 to November 01, 2020. Prof. Lalit Kumar Awasthi, Director, NIT Hamirpur graced the inaugural session as Chief Guest and Prof. S. C. Jai, Former Dean & Chairman, Punjab University as the Guest of Honour. Dr. Tapas Palai, Chairman (ARTCE-2020) & Head, Chemical Engineering Department; Dr. Leela Manohar, Convener; Dr. Arvind K. Gautam & Dr. Rahul Saha, Coordinator were also addressed the gatherings. Main focus of this STC was to explore the recent aspects of research in the field of Chemical Engineering. Total 13 expert lectures were scheduled during this five-day program. The eminent speakers includes Prof. S. C. Jai, Former Dean & Chairman, Punjab University; Prof. Anil Verma, IIT Delhi; Prof. Dipankar Bandyopadhyay, IIT Guwahati; Prof. Amit Kumar Dhiman, IIT Roorkee; Dr. Aziz Rahman, Texas A&M, Qatar; Dr Avinash Candra, TIET Patiala; Dr. Sushil Kumar, MNNIT Allahabad; Dr. Yogesh M. Nimdeo, IIT Jammu; Dr. Indranil Saha Dalal, IIT Kanpur; Prof. M. K. Jha & Dr. Raj Kumar Arya, NIT Jalandhar; Dr. R. K. Nagarale, CSMCRI, Gujarat. We, received around 1200 application, but due to technical limitation we were able to allow only a restricted numbers. Hence, total 70 participants from various organizations were participated. The event was successfully concluded with all the positive remarks by our valedictory Chief Guest Prof. M. K. Jha, NIT Jalandhar, Punjab on 1st November, 2020. In addition, we received very good feedback from most of the participants of this course.

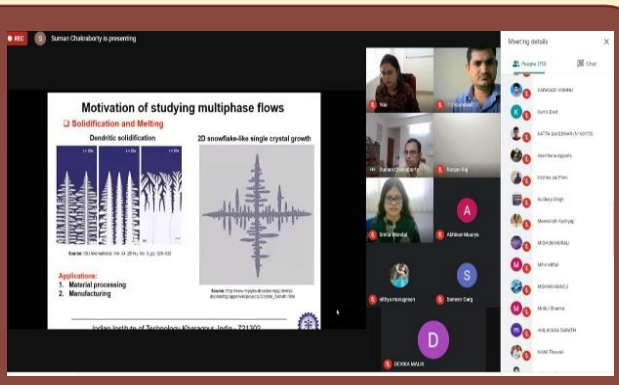
Short Term Courses conducted

The Department of Chemical Engineering, National Institute of Technology Hamirpur has organized an Online Short-Term Course (e-STC) on “Modelling and Simulation for Transport Processes (MSTP-2020)” from 4 th -8 th November-2020. The e-STC was inaugurated in the presence of the honorable chief guest Prof. Lalit Kumar Awasthi, Director NIT Hamirpur, chairman Dr. Tapas Palai, Head, Department of Chemical Engineering NIT Hamirpur, eminent speakers, convener Dr. Smita Mondal, co-ordinators Dr. Pooja Thakur and Dr. T. C Kumawat, and the organizing committee. The eminent speakers of this programme were Dr. R. P. Chhabra (IIT Ropar), Dr. Suman Chakraborty (IIT Kharagpur), Dr. Vivek V. Buwa (IIT Delhi), Dr. Naveen Tiwari (IIT Kanpur), Dr. Vimal Kumar (IIT Roorkee), Dr. Akhilesh Kumar Sahu (NIT Rourkela), Dr. Amit Kumar Dhiman (IIT Roorkee), Dr. Dharitri Rath (IIT Jammu), and Dr. T. C. Kumawat (NIT Hamirpur). Total 95 participants were registered from all over India. The short- term course has provided basic ideas and concepts to design a model of any physical experimental set-up and simulation. The STC has hands-on training session on COMSOL Multiphysics for modeling and simulations of applications involving ODE and PDEs. The key findings were as follows:

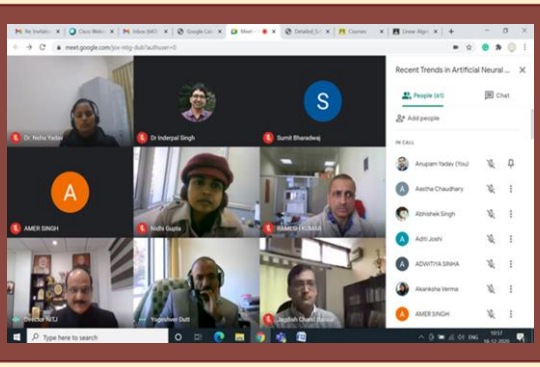
- to understand the theoretical, analytical and numerical approach of realistic industrial problems,
- the steps involved to formulate models and develop constitutive equations,
- to identify appropriate methods for different complex problems like Finite element, Finite volume, etc.
- provide hands on training on simulation tool.

This course has motivated and guided our participants to develop and extent their research field. The purpose of the e-STC was to provide fundamental knowledge of mathematical modeling required for mass, momentum, and heat transfer processes. The primary focuses of the course was to explore various aspects of modelling and simulation on transport processes such as convective heat transport in external flows, Phase field modelling, complex multiphase flow processes, stability analysis, turbulence modelling and fabrication of high performance mixer, lubrication theory, CFD analysis of non-Newtonian fluids, modelling of microfluidic devices.





The e-STC on "Recent trends in Artificial neural networks and Optimization (RTNNO-2020)" was organized by the Department of Mathematics & Scientific Computing during Dec 18-22, 2020. Total 39 participants from various institutes of India including faculty, research scholars and students joined the short-term course. Invited speakers from the institute of National repute joined via online mode to deliver their lectures to enrich the knowledge of participants in the field of Machine learning, neural networks, and optimization.



Text / Reference Book Published

S. No.	Title of the book with ISBN	Name (s) of the Author (s)	Year of Publication	Publisher
1	Diagnostic Applications of Health Intelligence and Surveillance Systems, ISBN13: 9781799865278, DOI: 10.4018/978-1-7998-6527	Divakar Yadav, Abhay Bansal, Madhulika Bhatia, Madhurima Hooda, Jorge Morato	January, 2021	IGI Global (USA)
2	E-learning Methodologies: Fundamentals, Technologies and Applications, ISBN: 9781839531200 e-ISBN: 9781839531217, Book DOI: 10.1049/PBPC040E	Mukta Goyal ; Rajalakshmi Krishnamurthi ; Divakar Yadav	2021	IET (UK)
3	Recent Trends in Management and Social Sciences 9789390818556	Prof. Piar Chand, Dr. Richa Joshi, Dr. Neeraj Dhiman, Dr. Sachin Kumar	2021	Bharti Publication House New Delhi
4.	Quality Management Practices in MSME Sectors	Dr. Rajiv Kumar Sharma	2020	Springer

Awards

S. No.	Name of Faculty	Name of Organisation	Date	Award
1	Dr. Deepak Sharma	International Conference Paper Presentation in RAME-2020, DTU, Delhi	2020	Got First Prize for Best Paper Category in RAME-2020
2	Dr. Dilshad A. Khan	The Institutions of Mechanical Engineers, London (U.K),	1st December 2020	Honored with the title of *Chartered Engineer (CEng)*
3	Dr. Dilshad A. Khan	International Conference on Industrial and Manufacturing Systems (CIMS-2020), Dr. B. R. Ambedkar National Institute of Technology, Jalandhar	October 09-11, 2020	*Best Paper Award*
4	Dr. Dilshad A. Khan	International Scientist Awards 2021 by VDGood, Goa	6-7 March 2021	Best Researcher Award
5	Arvind K. Gautam	NIT Jalandhar, Punjab, India	16 January 2021	Best Oral Presenter
6	Arvind K. Gautam	ICS, Kolkata, India	28 December 2020	Research Excellence Award
7.	Dr. Jai Prakash	VDGOOD	8-9 January 2021	International Scientist Award

Book Chapter Published

S. No.	Title of the Chapter	Name (s) of Author (s) of Chapter	Title of the Book	Name(s) of Editor(s)	Year of Publication	Publisher
1	An introduction to smart grid and demand-side management with its integration with renewable energy	Bharti Koul, Kanwardeep Singh, Y S Brar	Advances in Smart Grid Power System	Anuradha Tomar, Ritu Kandari	2020	Academic Press , ELSEVIER
2	Study of the Most Commonly Utilized Maximum Power Point (MPP) Tracking (MPPT) Schemes for SPV Systems	Pawan Kumar Pathak, Anil Kumar Yadav and PA Alvi	Electrical and Electronic Devices, Circuits, and Materials: Technological Challenges and Solutions	Suman Lata Tripathi, Umashankar Subramaniam , Parvej Ahmad Alvi	2021	Scrivener Publishing , John Wiley & Sons
3	Mnemonics in e-learning using augmented reality	Dinesh Kumar Saini, Arun Kumar Yadav, Kartik Sharma	E-learning Methodologies: Fundamentals, technologies and applications	Mukta Goyal Rajalakshmi Krishnamurthi , Divakar Yadav	2021	IET Digital Library
4	Introduction of E-learning Methodologies: Fundamentals, technologies and applications, pp. 3-25	Mukat Goyal; Rajalakshmi Krishnamurthi, Divakar Yadav,	E-learning Methodologies: Fundamentals, technologies and applications	Mukta Goyal Rajalakshmi Krishnamurthi , Divakar Yadav	2021	IET Digital Library
5	Student Performance Prediction for Adaptive E-learning Systems, pp. 79-103	Mukta Goyal, Divakar Yadav, Mehak Sood	E-learning Methodologies: Fundamentals, technologies and applications	Mukta Goyal Rajalakshmi Krishnamurthi , Divakar Yadav	2021	IET Digital Library
6	Green communication technology, IOT, VR, AR in smart environment	Riyazveer Singh, Sahil Sharma, Vijay Kumar	Cognitive Computing Using Green Technologies	Asis Kumar Tripathy, Mahasweta Sarkar, Sanjaya Kumar Panda	2021	CRC Press
7	Visual Quality Improvement using Single Image Defogging Technique	Pritam Verma, Vijay Kumar	Research Innovations and Trends on Computer Vision and Recognition Systems	Chiranji Lal Chowdhary G. Thippa Reddy B. D. Parameshachari	2021	Apple Academic Press
8	Skull stripping and Tumor detection using 3 Dimensional U-Net	Isha Sharma, Rahul Gupta, Vijay Kumar	Machine Learning, Big Data, and IoT for Medical Informatics	Pardeep Kumar, Yugal Kumar, Mohamed A. Tawhid	2021	Academic Press

Significant Outreach Activities

S. No.	Name of Activity	Duration of Activity
1	Job Contract at Shimla by the Co-ordinator TIFAC CORE, Dr. R K Jarial with TIFAC Industry Partner HP State Electricity Board Ltd.	06-03-2021
2	A PhD thesis of NIT Kurukshetra is evaluated by Dr. R. N. Sharma	Octo 2020 - Jan 2021
3	"Power System Moving Toward Deregulation", keynote lecture delivered by Dr. Y R Sood on October 19, 2020 in six days online Short Term Training Program (STTP) On "Electrical Power System" held during October 19-24, 2020 organized by Department of Electrical Engineering Arya College of Engineering & IT, Jaipur, Rajasthan.	October 19, 2020
4	"Importance of Green Micro grid for Recent Development in Power System" expert lecture delivered by Dr. Y R Sood on November 27, 2020 in AICTE Sponsored online Short Term Training Program (STTP) on "Smart Grid Technology" held during 23-28 November 2020 at Department of Electrical Engineering, Arya College of Engineering & IT Jaipur.	November 27, 2020
5	"Restructured electricity supply system" expert lecture delivered by Dr. Y R Sood on March 15, 2021 on Deregulated Power Systems: An overview" Short Term Training Program (STTP) held during 15-19 March, 2021 at Department of Electrical Engineering, MNIT Jaipur	March 15, 2021
6	Expert talk by Dr. Rajan Kumar in an online Faculty Development Program on "Recent Trends and Advances in Renewable Energy Sources," jointly organized by Rajasthan Technical University Kota and Poornima College of Engineering Jaipur	18-22 February 2021
7	Expert talk by Dr. Rajan Kumar in an online Short Term Course on "Research Trends in Energy and Power Systems (RTEPS)," organized by Maulana Azad National Institute of Technology Bhopal	19-23 October 2020
8	Invited talk on TEQIP sponsored e-STC at GCE Bhawanipatna, Odisha.	11 Dec 2020
9	Invited talk on Webinar at Deptt of Physics, CCS HAU Hisar.	15-16 Jan 2021
10	Technical Session Chair at Intl Conf FSAET-2020 at GLAU Mathura.	18-19 Dec 2020
11	Technical Session Chair at Intl Conf ICRADMM-2020 Amity University Gwalior.	15-16 Oct 2020
12	Expert lecture in QIP Short Term Course on Resent Advancement in Structural and Geotechnical Engineering organized by the Department of Civil Engineering, IIT Indore.	08-13 March 2021
13	Expert lecture in Short Term Course on Analysis and Design of Structures: Practices and Challenges organized by the Department of Civil Engineering, NIT Jalandhar.	February 15-19, 2021
14	Expert lecture in Faculty Development Programme on "Advancement in Structural Engineering & Concrete Technology" organized by Aanand International College of Engineering, Jaipur.	1-5 February, 2021
15	Expert lecture in Short-Term Training Program on Assessment of Engineering In Infrastructural Development organized by the Department of Civil Engineering, Engineering College Jhalawar	October 26th to November 04th, 2020

Significant Outreach Activities

S. No.	Name of Activity	Duration of Activity
16	"Nanoelectronics: Materials, Devices and Applications". Place: NIT Jamshedpur, Description of Event: Short Term Course On "Recent Advances in Electronic Devices for Real Life Application (REDA-2020)". By Dr Gopal Rawat	
17	"Nanotechnology Based Thin Film Sensors". Place: NIT Hamirpur, Description of Event: E-Workshop on "Design Challenges of IoT with AI and ML applications". By Dr Gopal Rawat	
18	"Fabrication and Investigation of Nanoscale Optoelectronic Devices". Place: Jaypee Institute of Information Technology, Noida, Description of Event: FDP on Recent Trends in Photonics Technology. By Dr Gopal Rawat	
19	"Fabrication and Investigation of Nanoscale Optoelectronic Devices". Place: Jaypee Institute of Information Technology, Noida, Description of Event: FDP on Recent Trends in Photonics Technology. By Dr Gopal Rawat	
20	"Nanoelectronic Devices for Energy and Environment Applications". Place: VIT Chennai , Description of Event: FDP on "Advanced Materials for a new generation Nanoelectronic Devices (AMND-2021) . By Dr Gopal Rawat	
21.	"Electrical Characterization of Hybrid Organic and Inorganic Devices". Place: IIIT, Bhagalpur, Description of Event: Workshop on "Next-Generation Nano-electronics Devices, Circuits and its Applications using EDA tools". By Dr Gopal Rawat	
22.	"Design and Fabrication of Low-cost Quantum Dots-Based Devices". Place: Government Engineering College Raipur, Description of Event: Short Term Training Program on "Design and Fabrication of VLSI Circuits". By Dr Gopal Rawat	
23.	Condition Monitoring and Industrial Automation (CMIA-2021) By Dr Aman Kumar	
24.	Expert lecture delivered at e-Workshop on Modelling and Simulation in thermal engineering (MSTE-2020) by Dr. Tara Chand Kumawat	30th October - 03rd November 2020
25.	Expert lecture delivered on Insight of the Transportations of fluids at Dr. Ambedkar Institute of Technology for Handicapped, Awadhpuri, Kanpur by Dr. Pooja Thakur	8th February 2021
26.	Expert lecture delivered at e-STC on Advanced Research Trends in Chemical Engineering (ARTCE - 2020) by Dr. Rahul Saha	28th Oct- 1st Nov 2020
27.	Expert lecture delivered at ATAL Academy Faculty Development Programme (FDP), Upstream Petroleum Technology, Dibrugarh University, Assam by Dr. Rahul Saha	23 rd to 27 th November 2020

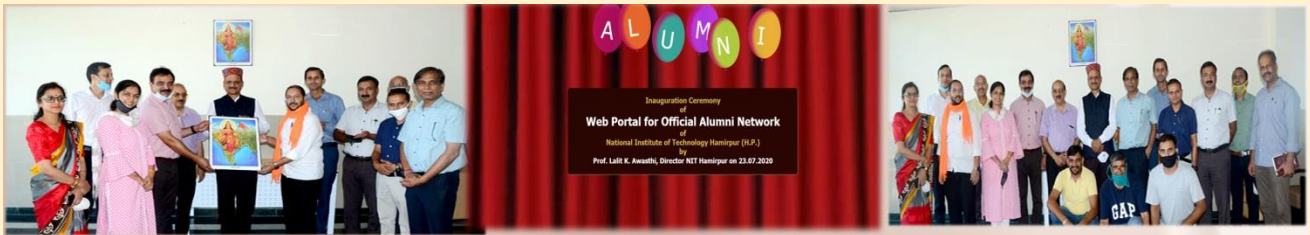
Institute Placements

Branch	Eligible Candidates	Placed	% Placement	Total Jobs Offered	% Jobs offered to NITH	Max CTC (in lakhs)
Computer Science & Engg.	84	73	86.90%	98	116.67%	20.00LPA
Computer Science & Engg. Dual Degree	55	50	90.44%	62	112.73%	23.00 LPA
Electronics & Comm. Engg.	82	58	70.73%	65	79.27%	11.00 LPA
Electronics & Comm. Engg. Dual Degree	34	17	50.00%	21	61.76%	23.05 LPA
Electrical Engg.	83	35	42.17%	38	45.78%	9.07 LPA
Mechanical Engg.	81	31	38.27%	32	39.51%	35.00 LPA
Civil Engg.	70	15	21.43%	15	21.43%	9.07 LPA
Chemical Engg.	54	16	29.63%	17	31.48%	9.00 LPA
Architecture	29	2	6.89%	2	6.89%	5.00LPA
Material Science Engg.	20	5	25.00%	5	25.00%	6.5 LPA
M.Tech (All)	202	16	7.92%	18	8.91%	23.05LPA
MBA	13	1	7.69%	1	7.69%	3.71 LPA

Other Institute Activities

"SWACHH BHARAT ABHIYAN" Cleanliness Event Organized on 2nd October 2020 in NIT Campus

FIT INDIA FREEDOM WALK BY FACULTY & STAFF OF NIT HAMIRPUR



INAUGURATION OF ALUMNI AFFAIRS & ALUMNI ASSOCIATION OFFICE & LAUNCHING OF WEB PORTAL FOR OFFICIAL ALUMNI NETWORK

Disclaimer

NITH Newsletter is meant for periodical private circulation among members of research and academic fraternity only and is intended to bring updates of the institute's activities related information. Sources of all cited information have been acquired from concerned individuals and are hereby duly acknowledged. Readers are advised to read, refer, research and quote content from the original source only, even if the actual content is reproduced. The information content does not reflect quality judgment, prejudice or bias by NITH newsletter committee. Selection is based on the relevance of content to members, readability/ brevity/ space constraints/ availability of content.

Published by Faculty Incharge (News Bulletin)

E-Newsletter is also available at:

National Institute of Technology, Hamirpur
Hamirpur (H.P.), India – 177005
Tel: +91-01972-254011

राष्ट्रीय प्रौद्योगिकी संस्थान, हमीरपुर
हमीरपुर (हि.प्र.), भारत – 177005
फ़ोन: +91-01972-254011