MESSAGE FROM THE DIRECTOR

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

The launching of this Newsletter is a matter of great happiness for all of us and for me at the personal level as it is like contributing my services to the Institute that I am so attached to. The publishing of this Newsletter at a time when whole of the world is desperately trying to deal with an unprecedented situation makes us analyse our own role in the future of humanity. The present situation has focused the attention of the "knowledge society" to the importance of knowledge sharing. This could not be any more true for the Technological Knowledge sharing.

The present issue of Newsletter of NIT Hamirpur is a humble endeavour to share and showcase to our fellow brethrens a glimpse of what we have been doing at the prestigious institute NIT Hamirpur. The learned faculty, despite some bottlenecks, has been enthusiastically involved in pursuit of knowledge and through this Newsletter is making a humble endeavour in knowledge sharing with the like-minded in the field of Engineering education. The Newsletter of NIT Hamirpur is a step forward in the direction of knowledge sharing. It is a matter of pride for whole of the NIT Hamirpur family that we have been constantly marching ahead in teaching learning, research and innovation and keeping pace with all other institutes of eminence in the field of Engineering and Technology.

Through the guidance and directions of Government of India's initiatives NIT Hamirpur has been rendering services to the local area development. The faculty believed in developing intelligence from diverse sources and using the same for the upliftment of those sections of society who look up for guidance in any field. Intelligence is commonly associated with knowing something that we can confidently apply what we know in a particular context. But new situations seek new solutions and it is at these times that we have to work and think in a novel manner. This shift in stance brings about a shift in perspective. The perspective shift, big or small, helps us in acquiring new knowledge. Through this Newsletter, showcasing some of our activities, we seek to spread a word about our humble contribution to engineering education.

The parameters of NIRF ranking system are being meticulously worked upon and by the next year we are sure to be at the higher ranking. The esteemed faculty is working upon the gap between what we're giving and what we're capable of giving and once we channelize all our resources and strengths, we would become what we aim at...the best!

When we feel connected to the moral purpose of our work, we develop a new perspective and start behaving differently. Speaking of "moral purpose" teaching our students to be good human beings along with good engineers is all that defines our moral purpose.

Prof. Lalit Kumar Awasthi
Director

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

Activities related to COVID-19

The following initiatives have been taken by NIT Hamirpur to fight the COVID-19 outbreak:

1. Deep Learning Assisted Covid-19 Detection using full CT-scans

By Nitin Gupta, Amit Kaul (EED) and Varan Singh Rohila (B.Tech. Student)

The ongoing pandemic of COVID-19 has shown the limitations of our current medical institutions. There is a need for research in the field of automated diagnosis for speeding up the process while maintaining accuracy and reducing computational requirements. In this work, an automatic diagnosis of COVID-19 infection from CT scans of the patients using Deep Learning technique is proposed.

The proposed model, ReCOV-101 uses full chest CT scans to detect varying degrees of COVID-19 infection, and requires less computational power. Moreover, in order to improve the detection accuracy, the CT-scans were reprocessed by employing segmentation and interpolation. The proposed scheme is based on the residual network, taking advantage of skip connection, allowing the model to go deeper. Moreover, the model was trained on a single enterprise level GPU such that it can easily be provided on the edge of the network, reducing communication with the cloud often required for processing the data.

The objective of this work is to demonstrate a less hardware-intensive approach for COVID-19 detection with excellent performance that can be combined with medical equipment and help ease the examination procedure. Moreover, with the proposed model an accuracy of 94.9% was achieved. (Submitted to: IEEE International Conference on Communication (ICC 2021), Montreal Canada) and Journal of Complex and Intelligent Systems, Springer (SCI Indexed).
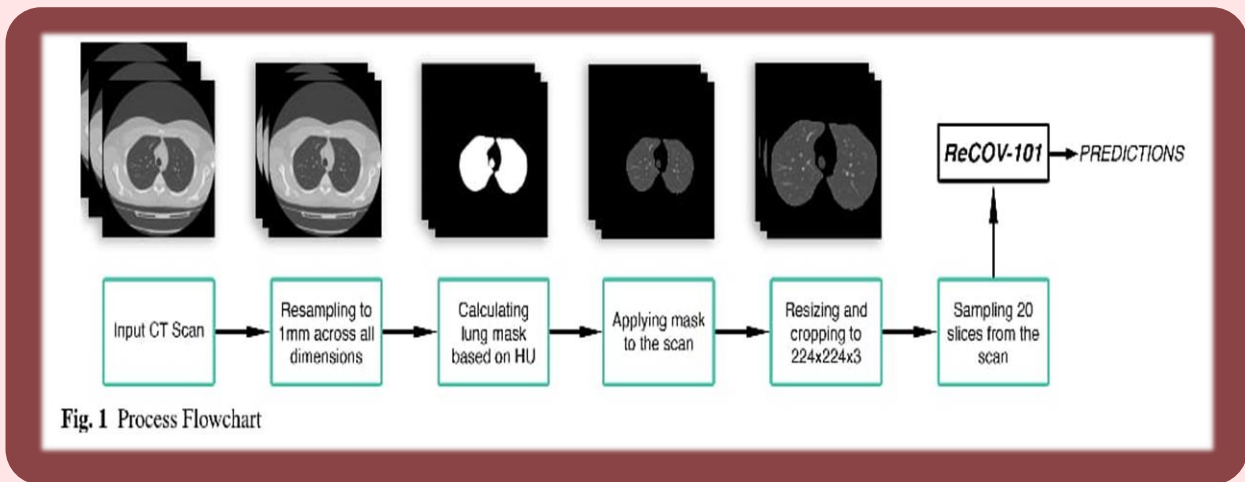

Fig. 1 Process Flowchart

2. Lattice Cryptography based Geo-encrypted Contact Tracing for Covid-19 Detection

by Nitin Gupta, Mayank Dhiman, Ujjawal Gupta and Yashwant Kumar (B.Tech. Third Year Students)

The world has already witnessed many epidemic diseases in the past years, like H1N1, SARS, and Ebola etc. Now, Covid-19 has also been added to list, which is declared as pandemic by World Health Organization. One of the most commonly used methods to tackle the spread of such diseases is using mobile applications to perform contact tracing of the infected person. However, contact tracing applications involve transmitting sensitive location based data of the infected person to the government servers.

Therefore, recently this has raised a lot of concerns regarding privacy of the infected persons. This work proposes a light-weight and secure encryption scheme, based on location based encryption which can be used to transfer the location data to the server without compromising its security.

The main aim of the work is design an algorithm in such a way that the encrypted transferred data can only be decrypted at the server and in-between data leakage can be prevented. (Submitted to: Journal of Cryptographic Engineering, Springer, Scopus & ESCI Indexed).

External sponsored Research and Development Projects sanctioned

Sr. No.	Title of R&D Project/ Patent	Heading Status [PI / Co-PI(.)]	Present Status of Project
1.	Effect of Nano particles blending on Performance & Emission of Diesel and Biodiesel in a CI Engine	Dr. B. L. Gupta (PI) Dr. Debashish Das (Co-PI)	Ongoing
2.	Numerical Investigations of Some Momentum and Heat Transfer Problems in Complex Nano fluids	Dr. Rajesh Kumar Sharma	Completed
3.	Solution of Various form of Differential and Integral Equations through concept of Fixed Point Theorems	Dr. R.K. Vats	Ongoing
4.	Developing Enablers for Consumer Adoption of Internet of Things (IoTs) in Smart Cities development	Dr. Shampy Kamboj	Ongoing/ Submitted to the SPARC
5.	Information Technology Stress and Productivity: A Case Study	Dr. Vivek Tiwari (Project Director)	Ongoing
6.	Compressed Parallel Wavelet Tree Based Semantic Search	Dr. Sonam Gupta (PI) Dr. Arun Yadav (Co-PI)	Ongoing
7.	Efficient Forest Fire Detection Mechanism using Wireless Sensor Networks	Dr. Siddhartha Chauhan (PI) Dr. Pardeep Singh (Co-PI)	Ongoing
8.	Machine Learning and Deep Learning based cyber security framework for identification of phishing websites & malicious Uniform Resource Locators (URLs)	Dr. Basant Subba	Approved
9.	Mathematical modelling of COVID-19 Corona Virus	Dr. Dharmendra Prasad Mahato	Ongoing
10.	Maintenance and Operation of Demonstration Project on Geothermal Energy of Heating Space in Chumathang, Laddakh	Dr. R. S. Bansthu	Ongoing
11.	Traffic Safety Assessment at Horizontal Curvature on Hilly Highways using Lateral Indiscipline based Approach	Dr. Subadeep Biswas Dr. Sunil Sharma (Co-PI)	Ongoing
12.	Adolescent sanitation practices and infrastructure facilities in Himachal Pradesh (A study of Knowledge, Attitude and Practices)	Dr. Manoj Sharma Dr. Piar Chand (Co-PI)	Completed
13.	Social-Economic-Environmental Trade-offs in managing the River-Land-Interface	Dr. Vijay Shankar (PI) Dr. Adani Azhoni (Co-PI) Dr. Brij Bala (Co-PI) Dr. Robert Grabowski (Co-PI) Prof. Ian Holman (Co-PI) Dr. Jeroen Meersmans (Co-PI) Dr. Jian Peng (Co-PI)	Ongoing
14.	Declining Sex Ratio in Border Districts of Himachal Pradesh	Dr. Manoj Sharma (PI) Dr. Piar Chand (Co-PI)	Ongoing
15.	Smart Gluco Binder: Design and Synthesis of Small Glucose Binder Molecules using Computational Intelligence Approach	Dr. Vijay Kumar	Completed
16.	Bridging the Mountainous Divide through Digital Astuteness and Capacity Building of Rural Woman in HP	Dr. Manoj Sharma	Ongoing
17.	Solution Techniques to Unit Commitment Problems in Power System integrated with Renewable Energy Sources	Dr. Ram Naresh Sharma (PI) Dr. Veena Sharma (Co-PI)	Ongoing
18.	Model Predictive Controller based Automatic Generation Control of Interconnected Power System integrated with Renewable Energy Sources	Dr. Veena Sharma (PI) Dr. Ram Naresh Sharma (Co-PI)	Ongoing
19.	Water Treatment for Removal of Chromium and Arsenic by Microbial Method Followed by Adsorption: Sustainable Solution with Minimum Environmental Impact	Dr. Tapas Palai	Completed on 23/09/2020
20.	Development of Amine Functionalized Polymer Electrolytes for Reduction of CO_2 to Fuel	Dr. Leela Manohar	Completed on 14/03/2020
21.	Flow and Heat Transfer over a Corrugated Tube Placed in Non-Newtonian Power-law Fluid in the Presence of Magnetic Field	Dr. Radhe Shyam	Completed on 21/09/2019

External sponsored Research and Development Projects sanctioned

22.	Experimental and Numerical Analysis for Stabilization of Antibubbles	Dr. Tara Chand Kumawat	Ongoing
23.	Drawing Strategy Canvas for the Global trade of High Technology Products: Study of High Defence Systems funded by DST, New Delhi	Dr. Somesh Sharma	Ongoing
24.	Health Care Solid Waste Management Practices in HP: An assessment and development of Strategic Tools.	Dr. Somesh Sharma	Ongoing
25.	Manufacture of pine needle based fibre boards/particle boards	Dr. Bharti Gaur (PI) Dr. Rajesh Sharma (Co-PI)	Ongoing
26.	Numerical Simulation of Thermoelastic Fracture Problems Using Element Free Galerkin Method	Dr. Mohit Pant	Ongoing
27.	Effect of surface protrusions on the collection efficiency of a modified cavity receiver.	Dr. Santosh Bhaulal Bopche	Ongoing
28.	Design, Development and Testing of a Multistage parabolic solar collector, Innovation and Entrepreneurship Development Centre, NITH	Dr. Santosh Bhaulal Bopche	Completed
29.	Solar thermal collection efficiency improvement using multistaging of parabolic dish collector.	Dr. Santosh B. Bopche (PI) Dr. Varun Goel (Co-PI)	Completed
30.	Special Manpower Development Project for Chip to System Design	Dr Ashwani Rana (PI), Dr. Rajeevan Chandel (PI) Dr Rohit Dhiman (Co-PI)	Ongoing
31.	Synthesis, Characterization, Biological and Computational study of series of 1-[1-oxo-3-phenyl-2(benzosulfonamide)-propylamido]-anthracene-9,10-dione analogs-Anthraquinone based anticancer drugs	Dr. Pamita Awasthi (Scientist mentor) Manu Vatsal (PI)	Completed
32.	Study and Development of Smart e-System for Crop Protection from Monkeys.	Dr. Ashwani Rana(PI), Dr. Rajeevan Chandel (Co-PI) Dr Pamita Awasthi(Co-PI)	Completed
33.	Performance and Emission Analysis of Biofuels in Diesel Engine using Antioxidant Additives	Dr. Pawan Kumar Singotia (PI) Dr. A. K. Choudhary (Co-PI)	Ongoing
34.	Design and Development of a Smart Autochef Device	Dr. Rajeevan Chandel (Mentor)	Completed
35.	Building Resilient Urban Communities (BReUCom)	Dr. IP Singh (PI) Dr. Puneet Sharma (Co-PI) Dr. Aniket Sharma (Co-PI)	Ongoing

Consultancy Projects sanctioned

S. No.	Nature of consultancy	Department	Status	Amount (in Rs.)
1.	Various Consultancy/Testing Works	Civil Engineering	Completed	18248726.00
2.	Various Consultancy/Testing Works	Computer Science and Engineering	Completed	2358419.00
3.	Development and Integration of One City Platform Multi Department Co-ordination Tool of E-Governance & One City App.	Computer Science & Engineering / Computer centre and Electronics & Communication Engineering	Ongoing	6000000.00
4.	Consultancy/Testing Work	Material Science & Engineering	Completed	365800.00
Total				**26972945.00**

Ph.D. Completed

S. No.	Title of Thesis	Supervisor / Co-Supervisor	Ph.D. Thesis Status
1.	Inhibition of Aggregation and Post-translational Modification of Human γD-crystallin: Implications in Cataract Prevention	Dr. K. S. Ghosh	Submitted
2.	Titanium – Indole complexes and their biological Applications	Dr. Raj Kaushal	Submitted
3.	Synthesis Characterization Biological and Computational Studies of Anthraquinone based Anti-Cancer Agents	Dr. Pamita Awasthi	Completed
4.	Fabrication and Electrical Characterization of Metal / Titanium Dioxide/Silicon and Metal/Silicon Heterojunctions	Dr. Kuldeep K. Sharma	Completed
5.	Potential of Treated Coir Geotextiles in Unpaved Roads	Dr. Raman Parti Dr. R.K.Dutta	Completed
6.	Performance of Multi Edges Footing with Structural Skirts Resting on Sand	Dr. R K Dutta	Submitted
7.	Study of Ventilation and Indoor Paints in Primary School Classrooms of Composite Cliate for Monitoring its Indoor Air Quality-Case study Hamirpur (H.P.)	Prof. Bhanu M Marwaha Dr Pamita Awasthi	Completed
8.	Analysis and Design of a Hybrid Model to optimize and Prioritize Attack Graphs for Cyber Warfare	Prof.Lalit Awasthi	Completed
9.	Security in Wireless Mobile Ad Hoc Network	Dr. Sidharth Chauhan	Completed
10.	Body Area Networks	Dr. Sidharth Chauhan	Submitted
11.	Sentiment Based Information Diffusion in Online Social Networks	Dr. T P Sharma	Submitted
12.	Landslide Hazards and Risk Assessment in Beas and Parvati Valley, District Kullu, Himachal Pradesh, India.	Dr. R. S. Banshtu	Completed
13.	Active Power Support from Wind Power Plants	Dr. O. P. Rahi	Completed
14.	Performance Analysis of Induction Motor Drive Using Slip Power Recovery Scheme	Dr. O. P. Rahi	Completed
15.	Optimal Operation of Green Micro-Grid in Deregulated Power Sector	Dr. Yog Raj Sood Dr. Rajnish Shrivastava	Completed
16.	Causality Testing Between Foreign Direct Investment, Economic Growth and CO2 Emissions in India	Dr Manoj Sharma	Completed
17.	Developing Measures to Assess the Extent of Competence Provided by Automation to Indian Steel Corporation	Dr. Sunand Kumar Dr. Somesh Sharma	Completed
18.	Experimental Investigation of Diesel Engine Characteristics by using Dual Biofuel Approach for Complete Elimination of Diesel	Dr. S.R. Chauhan Dr. Varun Goel	Completed
19.	Heat Transfer Enhancement and Fluid Flow Behaviour through Triangular Duct	Prof. Anoop Kumar	Completed
20.	Assessing the Parameters of Aviation Fuel Consumption	Dr. Somesh Kr. Sharma	Completed
21.	Modelling soil moisture dynamics in crop root zone under shallow ground water table	Dr. Vijay Shankar Dogra	Completed
22.	Time Synchronization in Wireless Sensor Networks	Dr. Narottam Chand	Completed
23.	Performance Enhancement of MEMS Based Fully Implantable Microphone for Hearing Application	Dr. Gargi Khanna	Completed
24	Performance Enhancement of Vibration based Micro-scale Piezoelectric Energy Harvesting System	Dr. Gargi Khanna	Submitted

Journal Papers

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- Velappan, A. B., Datta, D., Ma, R., Rana, S., Ghosh, K. S., Hari, N., & Debnath, J. (2020). 2-Aryl benzazole derived new class of anti-tubercular compounds: Endowed to eradicate mycobacterium tuberculosis in replicating and non-replicating forms. *Bioorganic Chemistry*, *103*, 104170.
- Rana, S., & Ghosh, K. S. (2020). Inhibition of fibrillation of human γD-crystallin by a flavonoid morin. *Journal of Biomolecular Structure and Dynamics*, (just-accepted), 1-15.
- Rana, S., Sarmah, S., Singha Roy, A., & Ghosh, K. S. (2020). Elucidation of molecular interactions between human γD-crystallin and quercetin, an inhibitor against tryptophan oxidation. *Journal of Biomolecular Structure and Dynamics*, 1-8.
- Sharma, V., Sharma, S., Rana, S., & Ghosh, K. S. (2020). Inhibition of amyloid fibrillation of human γD-crystallin by gold nanoparticles: Studies at molecular level. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 118199.
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- Kumar, P., Mathpal, M. C., Prakash, J., Viljoen, B. C., Roos, W. D., & Swart, H. C. (2020). Band gap tailoring of cauliflower-shaped CuO nanostructures by Zn doping for antibacterial applications. *Journal of Alloys and Compounds*, 154968.
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- Rana, A. K., Sharma, R., & Singha, A. S. (2019). Synthesis and Evaluation of Physicochemical Properties of Grewia Optiva Fiber Graft Copolymers. *Polymer Science, Series B*, *61*(4), 409-420.
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- Awasthi, P., Vatsal, M., & Sharma, A. (2019). Structural and biological study of synthesized anthraquinone series of compounds with sulfonamide feature. *Journal of Biomolecular Structure and Dynamics*, *37*(17), 4465-4480.
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Journal Papers

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- Nain, A. K., Vats, R. K., & Kumar, A. (2020). Coupled fractional differential equations involving Caputo-Hadamard derivative with nonlocal boundary conditions. Mathematical Methods in Applied Sciences (Accepted)
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- Verma S.K., Vats R.K., Nain A.K. (2020). Existence and uniqueness results for a fractional differential equation with nonlocal boundary conditions. Boletim da Sociedade Paranaense de Matemática (Accepted).
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Journal Papers

- Hasan S.A., Agrawal P., Ganesh T., Mohamed A.W. (2020). A Novel Discrete Binary Gaining-Sharing knowledge-based Optimization Algorithm for the Travelling Counselling Problem for Utilization of Solar Energy: A Novel Discrete Binary Gaining-Sharing knowledge-based Optimization Algorithm (Accepted)
- Agrawal P., Ganesh T., Mohamed A.W. (2020). Application of Water Cycle algorithm to Stochastic Fractional Programming Problem (Accepted).
- Agrawal P., Ganesh T. (2020). Fuzzy Fractional Stochastic Transportation Problem involving Exponential Distribution (Accepted).
- Agrawal P., Ganesh T. (2020). Solution of stochastic transportation problem involving multi-choice random parameter using Newton's divided difference interpolation (Accepted).
- Hemanth Kumar, M., Ganesh, T., Venkateswaran, M., & Reddy, P. R. S. (2020). Compound intervened poisson distribution through one server queuing model with non-homogeneous compound poisson arrivals in bulk and its service rates. Journal of Statistics and Management Systems, 1-18.
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Patents filed

S. No.	Title	Patent Application Number	Inventor / Author
1.	Internet of Things (IoT) Enabled Energy Management System.	201811007395 A	Rohit Dhiman, M.C. Chowdary, V.R. Teja, T. Anirudh, Rajeevan Chandel,
2.	Method and System for enriching life in a humanly maintained aquaculture environment.	201811034266	M.C. Chowdary, E.N.V.V. Chowdary, A. Kumar, Rohit Dhiman, and Rajeevan Chandel
3.	Continuous Roller Garbage Collecting Machine	201911014051	Rajesh Sharma
4.	Real Time Smart Honking System	201711042577A	Surender Soni
5.	Juvenile Hormone Mimics for silk moth (bombex mori): Green Approach to enhance silk production	201911047685	Pamita Awasthi

MOU(s) signed with National and International organizations

S. No.	Name of the party with whom MOU signed	Date of Signing
1	Sardar Vallabhbhai Patel Cluster University Mandi	22/10/2020
2	Dharamshala Smart City Ltd. at Dharamshaia, Distt. Kangra H.P.	29/09/2020
3	National Highways Authority of India (NHAI)	26/08/2020
4	Rajiv Gandhi Government Engineering College Kangra at Nagrota Bagwan Distt Kangra (HP) 176047	06/01/2020
5	CSIO, Chandigarh, Punjab	11/11/2019
6	National Power Training Institute (NPTI), Sector 33, Faridabad, Haryana – 121003	07/09/2019
7	Semi-Conductor Laboratory, Department of Space, GOI, SAS Nagar, Mohali-Punjab	19/08/2019
8	Indian Institute of Technology, Roorkee	17/06/2019
9	E&ICT Academy, Roorkee	20/05/2019

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
1	Sustainability and cultural conformity in vernacular architecture: a Case Study of Kurichyar tribe of Wayanand, Kerala. International Conference on Future Cities -2019	N/A	2019	Athul P, Vandna Sharma
2	Solving Transportation Problem with Stochastic Demand and Non-Linear Multi-Choice Cost. In AIP Conference Proceedings, Vol. 2134, No. 1, p. 060002.	Scopus	2019	Agrawal, P., & Ganesh, T.
3	A Nonlinear Telegraph Equation for Edge-Preserving Image Restoration	Scopus	2020	Jain S.K., Yadav J., Rao M., Sharma M., Ray R.K.
4	MHD flow of Sisko Nano fluid over a stretching sheet with joule heating	N/A	2019	Rajesh Sharma and Ankita Bisht,
5	A Secure Authentication Protocol for Vehicular Ad-Hoc Networks	Scopus	2019	P. Chandrakar, A. Jain, S. Balivada, R. Ali
6	Cryptanalysis and Improvement of a Secure Mutual Authentication Scheme for Remote Users	Scopus	2019	Preeti Chandrakar, Ankita Singh Chauhan, Rifaqat Ali
7	A Secure Authentication Mechanism for Wireless Sensor Networks	Scopus	2020	R. Ali, P. Chandrakar, Md. S Obaidat, K Hsiao, AK Pal, SK Hafizul Islam
8	Selection of Indian Cricket team in ODI using Integer Optimization	Scopus	2020	Prachi Agrawal, Talari Ganesh
9	A Statistical Study on the Emotional Intelligence of B. Tech Students of NIT Hamirpur	Scopus	2020	Arpan Garg, Prachi Agrawal, Talari Ganesh
10	Solution of Uncertain Solid Transportation Problem by Integer Gaining Sharing Knowledge Based Optimization Algorithm	Scopus	2020	Prachi Agrawal, Talari Ganesh, Ali Wagdy Mohamed
11	Customized expectation maximization for glioma segmentation and identification from brain MRIs,	Scopus	2019	Gupta N, Bhatele P, Khanna P
12	Do Personality Traits Drive Tourist Dishonest Behaviour at Tourist Destination?	N/A	2020	Adil, M., Sadiq, M.
13	Green Management Practices in Hotels: Barriers and Challenges	N/A	2019	Adil, M.; Dogra, N., Sadiq, M. Anand, A.
14	Identifying indicators of sustainable smart agriculture driven by big data using modified total interpretive structural modelling (m-TISM)	Scopus	2020	Dogra, N. & Adil, M.
15	Secrecy Analysis of Underlay Cognitive Radio with Delayed Channel Information, WIDECOM 2020, Ryerson University, Ontario, Canada.	N/A	2020	Anshu Thakur, Ashok Kumar, Nitin Gupta
16	"Contract Theory Based Incentive Mechanism Design Approaches in Cognitive Radio Networks: A Survey, IEEE IoT-SIU 2019), Ghaziabad, UP, India	Scopus	2019	Nitin Gupta, Sanjay K. Dhurandher, Bhoopendra Kumar
17	Interrelationship between thermal conditions and indoor pollutants in primary schools of Himachal Pradesh	N/A	2019	Venu Shree, Bhanu M Marwha, Pamita Awasthi
18	Lane-Finding Based on Structure Analysis of Lane and Computer Vision	Scopus	2019	Shashank Gupta, Divakar Yadav
19	Efficient algorithms for frequent item set mining: A survey	Scopus	2019	Tripti Tripathi, Divakar Yadav
20	Performance evaluation of methods for mining frequent item sets on temporal data	Scopus	2019	Tripti Tripathi, Divakar Yadav

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
21	Image Enhancement: A Review	Scopus	2019	P. Kumari, D. Yadav, N. P. Singh
22	GLCM Based Feature Extraction and Medical XRAY Image Classification using Machine Learning Techniques	Scopus	2019	Pawan Kumar Mall, PK Singh, Divakar Yadav
23	Information Fusion based Intruder Detection Techniques in Surveillance Wireless Sensor Network	N/A	2020	Anamika Sharma, Siddhartha Chauhan
24	Grid Scrutinize based Heuristic Sensor Node Scheduling Protocol with Partial Coverage Constraint in WSN	Scopus	2019	Anamika Sharma, Siddhartha Chauhan
25	Building Dominating Sets to Minimize Energy Wastage in Wireless Sensor Networks	Scopus	2019	Nilanshi Chauhan, Siddhartha Chauhan
26	Distributed routing for underwater wireless sensor networks using cuckoo search-ant colony optimization	Scopus	2020	Dharmendra Prasad Mahato, Jasminder Kaur Sandhu, Kamlesh Dutta
27	Aspect-based Text Classification Approach	N/A	2020	Triveni Lal Pal, Kamlesh Dutta
28	Dependability Analysis for On-Demand Computing Based Transaction Processing System	Scopus	2019	Mahato D.P., Sandhu J.K., Singh N.P., Dutta K.
29	Dependability Analysis for On-Demand Computing Based Transaction Processing System	N/A	2019	D. P. Mahato, J. Kaur Sandhu, N. P. Singh, K. Dutta
30	MaplDroid: Malicious Android Application Detection based on Naive Bayes using Multiple Feature Set	Scopus	2019	Parnika Bhat, Kamlesh Dutta, Sukhbir Singh
31	Music Listening History Dataset Curation and Distributed Music Recommendation Engines Using Collaborative Filtering	Scopus	2019	Param Singh, Kamlesh Dutta, Robert Kaye, Suyash Garg
32	Fileless Malware Detection Model using CPN,	N/A	2019	Radha Rani, Kamlesh Dutta, Dharmendra Prasad Mahato,
33	Optimizing Stream Data classification using improved Hoeffding Bound	Scopus	2019	Arvind Pillania, Pardeep Singh, Vrinda Gupta
34	Automatic Keyphrase Extraction using SVM	Scopus	2019	A.Guleria, R. Sood, P. Singh
35	Automatic Text Summarization Techniques Used in Industry	Scopus	2019	Mukesh Kumar Kharita, Pardeep Singh
36	A Neural Network based NIDS framework for intrusion detection in contemporary network traffic	IEEE Explore	2019	B. Subba
37	A TfidfVectorizer and SVM based sentiment analysis framework for text data corpus	IEEE Explore	2020	V. Kumar, B. Subba
38	Distributed Routing for Underwater Wireless Sensor Networks Using Cuckoo Search-Ant Colony Optimization	ACM Digital Library, Conference Rank: Core B and Tier-II	2020	Dharmendra Prasad Mahato
39	On Scheduling Transaction in Grid Processing System considering Load using Fuzzy Ant Colony Optimization	Scopus	2020	Dharmendra Prasad Mahato
40	Dependability Analysis for On-Demand Computing Based Transaction Processing System	DBLP	2020	Dharmendra Prasad Mahato, Jasminder Kaur Sandhu, Nagendra Pratap Singh, Kamlesh Dutta

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
41	Cuckoo Search Ant Colony Optimization Based Reliability Maximization of Grid Transaction Processing System	ACM Digital Library, Conference Rank: Core B and Tier-II	2020	Dharmendra Prasad Mahato
42	Segmentation of Retinal Blood Vessel using an Algorithm-based Gamma Distribution of Matched Filter	N/A	2020	K. Susheel Kumar, Chandra Shekar Jatoth, Nagendra Pratap Singh
43	A Study on Convolution Neural Network for Breast Cancer Detection	Scopus	2019	Oinam Vivek Singh, Prakash Choudhary
44	An Efficient Image Bag Generator for Multi-instance Multi-label Learning	Scopus	2019	PK Bhagat, Prakash Choudhary
45	Diagnosis of Chest Diseases in X-Ray images using Deep Convolutional Neural Network	Scopus	2019	Abhishek Hazra, Prakash Choudhary, Arjun Choudhary
46	Manipuri Handwritten Character Recognition by Convolutional Neural Network	Springer	2019	S. Inunganbi, P. Choudhary, K. Manglem
47	A Study on Deep learning for Breast Cancer detection in Histopathological images	Springer	2019	O. Vivek Singh, P. Choudhary, K. Thongam
48	A Comparative Analysis for Various Stroke Prediction Techniques	Springer	2019	M. Sheetal Singh, P. Choudhary, K. Thongam
49	Supervised Machine Learning Based Network Intrusion Detection System for Internet of Things, 11th IEEE International Conference on Computing, Communication and Networking Technologies (ICCCNT), pp. 1-7, 2020.	IEEE Explore	2020	Deepa Rani, Narottam Chand
50	Biometric Based Secured Remote Electronic Voting System, 7th IEEE International Conference on Smart Structures and Systems (ICSSS 2020), Saveetha College of Engineering, 23rd & 24th July 2020. (BEST PAPER AWARD for the entire Session and Conference).	IEEE	2020	Samarth Agarwal, A. Jamwal, A. Haider, P. Dev, Rajeevan Chandel.
51	Fixed point division using Newton Raphson Algorithm," Int. Conference on Microelectronics, Computing and Communication System (MCCS-2020) (Online), organized by IETE Advanced Regional Telecom Training Centre, BSNL Ranchi, Jharkhand, India, 11-12 July 2020.	N/A	2020	Pawan Kumar Pandel, Dilip Singh, Rajeevan Chandel,
52	6th International Conference on Signal Processing and Communication (ICSC 2020), held at Jaypee Institute of Information Technology, Noida (INDIA) during 5th–7th March, 2020.	N/A	2020	Y. Kumar, H. Kumar, G. Rawat, B. N. Pal, S. Jit
53	Modified IMC for Automatic Voltage Regulator via Order Reduction Techniques, *IEEE India Council international conference*	Scopus	2020	Rishabh Verma, Anil Kumar Yadav
54	Comparative Analysis of Cross Wired Implementation of Digital Function Design in QCA," 1st International Conference on Communication, Computing and Signal Processing (CCSP-2020), NIT Jalandhar (Online), 23-24 July, 2020.	N/A	2020	Animesh Srivastava, Rajeevan Chandel

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S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
55	Compact Circularly Polarized Fractal Patch Antenna using Defected Ground Structure," TEQIP III Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW), Tiruchirappalli, India, 2019, pp. 29-33.	N/A	2019	S. Kotla, V. Shivani, M. Ashish, S. Kumar
56	Design and Analysis of Fractal Geometry Loaded Microstrip Patch Antenna," 2020 IEEE 5th International Conference on Computing, Communication and Automation (ICCCA), October 30-31,2020, Greater Noida, India (accepted)	IEEE	2020	R. Kumar, S. Kumar
57	Compact Circularly Polarized Patch Antenna for 5G Applications," 7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON 2020), 27th - 29th November 2020, Prayagraj, India (Accepted)	IEEE	2020	R. Kumar, S. Kumar
58	Miniaturized Broadband Circularly Polarized Slotted Ground Antenna with L-shaped Parasitic Strips," 7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON 2020), 27th - 29th November 2020, Prayagraj, India (Accepted)	IEEE	2020	N. Singh, S. Kumar
59	"CNN-LSTM based Electricity Theft Detector in Advanced Metering Infrastructure," 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT), Kharagpur, India, 2020, pp. 1-6.	N/A	2020	R. U. Madhure, R. Raman, S. K. Singh
60	Role of aluminium and MWCNT as a fuel in MoO3 based Nano thermite	AIP Conference	2020	Thakur, P., Sharma, V., & Thakur, N
61	Behavior of Strip Footing Resting on Sand Reinforced with Waste Tire Strips	Scopus	2019	A. K. Agnihotri, J.S. Yadav, S. Pal, A. Garg
62	"Landslide hazard assessment along Lahru to Chamba, Himachal Pradesh, India using certainty factor approach", International Congress Sustainable Development through Engineering Innovations (SDEI),	SCI	N/A	Pandey, D.D., Banshtu, R.S. Kanwarpreet Singh & Versain, L.D.
63	Performance evaluation of undivided streets: A clustering-based approach	N/A	2019	Biswas, S., Sharma, A., Pandey, A.
64	Analysis of sensitive parameters influencing a SPV/WT/Biomass/Battery based hybrid system, In 2019 8th International Conference on Power Systems (ICPS) (pp. 1-6).	Scopus	2019	Malik, P., Awasthi, M., Sinha, S.
65	MPC-Based Temperature Control of CSTR Process and Its Comparison with PID	N/A	2020	Vineet Kumar, Veena Sharma, O. P. Rahi
66	Distribution System Voltage Stability Index determination with Nature-Inspired Meta-heuristic Cuckoo Search Algorithm, *International Conference on Advances in Energy Technology*	N/A	2020	M. Sridhar Bhatlu, Satyajit Panigrahy, Ashwani Kumar Chandel

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S. No.	Title	Conference Status [SCI/Scopus/Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
67	Navigation and Path Planning of an Aerial Drone (Quadcopter) in *The International Conference on Artificial Intelligence in Manufacturing Renewable Energy (ICAIMRE2019), Gandhi Institute for Education Technology, Baniatangi, Bhubaneswar*	N/A	2019	Dr. P.B. Kumar
68	Position Sensorless BLDC Motor Drive for Single Stage PV Based Water Pumping, *IEEE 5th International Conference on Computing, Communication and Automation (ICCCA)*	Scopus	2020	Rajan Kumar, Bhim Singh
69	Optimal Location of UPQC in Fourteen Bus Distribution Network for Power Quality Improvement, *International Conference On Renewable Energy Integration Into Smart Grids*	N/A	2020	Ankush Sharma, Ashwani Kumar
70	Design of STATCOM for Reactive Power Control using Multilevel Inverter, *Second International Conference on Computing, Communication and Energy System*	N/A	2020	Amal Lazar, Ashwani Kumar
71	Voltage stability improvement of wind connected grid using hybrid power flow controller, *Second International Conference on Computing, Communication and Energy System*	N/A	2020	Himani Mattoo, Ashwani Kumar
72	Maximum Power Operation of SPV System using Advanced FL based Control Strategy, *IEEE 8th International Conference on Power Systems (ICPS)*	Scopus	2019	Pawan Kumar Pathak, Anil Kumar Yadav, P. A. Alvi
73	A New Methodology for Risk Analysis for Excitation System of Alternator in SHP using FIS. *4th International Conference on Intelligent Computing and Control Systems (ICICCS)*	N/A	2020	Saurabh Ranjan Sharma, O. P. Rahi, Arush Singh, Atul Jaysing Patil
74	Optimal Position Tracking for an AC Servomotor Using Linear Quadratic and Model Predictive Control, *4th International Conference on Information Systems and Computer Networks*	N/A	2020	Vineet Kumar, Veena Sharma, O. P. Rahi, Utsav Kumar
75	Robust Control of Position and Speed for a DC Servomotor System Using Various Control Techniques, *Advances in Electrical and Computer Technologies*	N/A	2020	Vineet Kumar, Veena Sharma, O. P. Rahi
76	Remaining life Assessment of Solid insulation in power transformer using fuzzy inference system (FIS), *International Conference on Intelligent Computing and Smart Communication (ICSC)*	N/A	2019	Deepak Kanumuri, Veena Sharma, O. P. Rahi
77	Design and Techno- Financial Analysis of Solar Photovoltaic Plant for School of Engineering & Technology at BGSB University Rajouri (J&K), *Applications of Computing, Automation and Wireless Systems in Electrical Engineering*	N/A	2019	Shafqat Nabi Mughal, Yog Raj Sood, R. K. Jarial
78	Heat transfer from a semi-circular cylinder to a Newtonian fluid under rectangular confinement, in *Asian Pacific Confederation of Chemical Engineering Congress (APCChE 2019), Sapporo, Japan*	Scopus	2019	Avinash Chandra, Arvind Kumar Gautam, Raj Kumar Arya

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
79	An Integrated Fuzzy Based Online Monitoring System for Health Index and Remnant Life Computation of 33 KV Steel Mill Transformer, *IEEE International Conference on Industry 4.0 Technology*	N/A	2020	Arush Singh Atul Jaysing Patil,, R K Jarial
80	A Fuzzy Modeling Technique to Assist Submersible Inspection Robot for Internal Inspection of Transformers, *IEEE 4th International Conference on Inventive Systems and control*	N/A	2020	Arush Singh Atul Jaysing Patil, Rajiv K Sharma, R K Jarial
81	Reliability Modeling and Simulation for Assessment of Electric Arc Furnace transformer, *International Conference on Computing, Power and Communication Technologies*	N/A	2020	Arush Singh Atul Jaysing Patil, R K Jarial, Rajiv K Sharma
82	Novel Six Phase Doubly Fed Induction Generator through Modeling and Simulation-A comparison with Conventional Doubly Fed Induction Generator, *International Conference on Power Electronics, Control & Automation*	N/A	2019	Neeraj Kumar Mishra, Zakir Husain
83	Effective Control Strategy in Microgrid, *International Conference on Intelligent Computing and Smart Communication*	N/A	2019	Ankur Maheshwari, Yog Raj Sood, Aashish Goyal, Mukesh Singh, Sumit Sharma
84	Human Recognition via PPG Signal using Temporal Correlation, *5th International Conference on Signal Processing, Computing and Control*	N/A	2019	A. Walia, A. Kaul
85	Automatic Recognition of Dialects of Himachal Pradesh Using MFCC &GMM, *5th International Conference on Signal Processing, Computing and Control (ISPCC)*	N/A	2019	A. Dogra, A. Kaul, R. Nath
86	Synchronization of Chain Network of 4-D Lorenz-Stenflo Systems using Contraction based Backstepping, *2nd International Conference on Innovative Mechanisms for Industry Applications (ICIMIA)*	N/A	2020	P. Anand, B. B. Sharma
87	Synchronization of Hyperchaotic Rossler system using Backstepping and sliding mode control, *2nd international conference on innovative mechanisms for industry applications*	N/A	2020	Shubham Singh, Anjali Tiwari, Himesh Handa
88	Synchronization of MLS chaotic system using adaptive backstepping, ***7th International conference on signal processing and integrated networks***	N/A	2020	Shubham Singh, Himesh Handa
89	Effective Control Strategy in Microgrid, ***International Conference on Intelligent Computing and Smart Communication***	N/A	2019	Ankur Maheshwari, Yog Raj Sood, Aashish Goyal, Mukesh Singh, Sumit Sharma
90	Numerical Simulation of Vadose Zone Moisture Profiles for Optimal Irrigation Scheduling, The 19th International Conference on Computational Science and its Applications, July 1-4, 2019, Saint Petersburg University, Saint Petersburg, Russia	Scopus	2019	Vijay Shankar

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
91	Sliding mode control for rossler prototype-4 system using two and three controllers, *7th International conference on signal processing and integrated networks*	N/A	2020	Anjali Tiwari, Himesh Handa
92	Simulink Modelling of a Solar-hydro-battery Integrated Microgrid System for Rural Electrification in India, *IEEE International Conference on Computing, Power and Communication Technologies*	N/A	2020	Prakhar Singh, Anup Kumar Yadav, Yog Raj Sood
93	An Innovative Fuzzy Modelling Technique for Photovoltaic Power Generation Farm's Failure Modes and Effects Analysis, *International Conference on Renewable Power*	N/A	2020	Vivek Kumar Tripathi, Arush Singh, Atul Jaysing Patil, Yog Raj Sood
94	Hotspot Detection in Distribution Transformers using Thermal Imaging and MATLAB, *International Conference on Renewable Power*	N/A	2020	Monika Sahu, Saurabh Ranjan Sharma, Rajesh Kumar, Yog Raj Sood
95	A Proposal for Evaluating the Clearness Index Based on Extra Terrestrial Radiations at a Given Site, *International Conference on Innovation in Modern Science and Technology*	N/A	2019	Shafqat Nabi Mughal, Yog Raj Sood, RK Jarial
96	A Proposal to Regulate Frequency in Deregulated Power System Using Unscheduled Interchange Tariff, *International Conference on Innovation in Modern Science and Technology*	N/A	2019	Shafqat Nabi Mughal, Yog Raj Sood
97	Pyrolysis kinetics of pine needle biomass using thermogravimetric analysis in 11th International Exergy, Energy and Environment Symposium (IEEES 11), SRM University Chennai, Tamilnadu, India	N/A	2019.	N.S. Thakur
98	Forest Biomass Waste to Energy in the Indian Himalayan Region: Potential & Scope in 11th International Exergy, Energy and Environment Symposium (IEEES 11), SRM University Chennai, Tamilnadu, India.	N/A	2019	N.S. Thakur
99	Comparative analysis of Transmission efficiency of Polyamide-66 spur gears meshing with dissimilar and dissimilar gear materials'	N/A	2019	Siddhartha
100	Identification of the factors related to pine needle gasification based electricity generation in the western Himalayan region" in International Conference on New and Renewable Energy Resources for Sustainable Future, ICONRERR-2019, SKIT Jaipur, Rajasthan, India,	N/A	2019	N.S. Thakur
101	Thermo- Mechanical peculiarity of TiC filler filled Gkass fiber based hybrid composites	N/A	2019	Siddhartha
102	Transmission Efficiency of Functionally Graded Material Based HDPE Spur Gears in ICMPC 2019 at Gokaraju Rangaraju Institute Of Engineering and Technology.Hyderabad, Andhra Pradesh, India.	N/A	2019	Siddhartha

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
103	Exploration on wear characteristics: performance of gears of Poly amide 66	N/A	2019	Siddhartha
104	Improvement in Machining Characteristics of Al 6063 in Dry Environment in 1st National Conference On Advances In Mechanical Engineering (NCAME-2019), NIT Delhi, 16th March 2019.	N/A	2019	Manoj Kr. Sinha
105	Drilling Process Improvements in EN31 Steel under Different Environments in 1st National Conference On Advances In Mechanical Engineering (NCAME-2019), NIT Delhi, 16th March 2019	N/A	2019	Manoj Kr. Sinha
106	A state-of-the art review on Fused Deposition Modelling Process in 4th International Conference on Advanced Production and Industrial Engineering(ICAPIE 2019), D.T.U. Delhi, December 20 - 21, 2019, Page 104.	N/A	2019	Manoj Kumar Sinha
107	Investigations on process parameters of Wire Additive Manufacturing (WAAM): A review in 4th International Conference on Advanced Production and Industrial Engineering(ICAPIE 2019), D.T.U. Delhi, December 20 - 21, 2019, Page 103.	N/A	2019	Manoj Kumar Sinha
108	A review on solar panel cleaning through chemical self-cleaning method, in 4th International Conference on Advanced Production and Industrial Engineering (ICAPIE 2019), D.T.U. Delhi, December 20 - 21, 2019.	N/A	2019	Manoj Kumar Sinha
109	Enhancement of Fracture Forming Limits by Crystallographic Texture Reformation of AA1050 Sheets in Single Point Incremental Forming in 38th International Deep-Drawing Research Group Conference	N/A	2019	Dr. Parnika Shrivastava, PuneetTandon
110	Sugeno Fuzzy Logic Analysis: Navigation of Multiple Humanoids in Complex Environments in The International Conference on Artificial Intelligence in Manufacturing Renewable Energy (ICAIMRE2019), Gandhi Institute for Education Technology, Baniatangi, Bhubaneswar	N/A	2019	P.B. Kumar
111	Navigation and Path Planning of an Aerial Drone (Quadcopter) in The International Conference on Artificial Intelligence in Manufacturing Renewable Energy (ICAIMRE2019), Gandhi Institute for Education Technology, Baniatangi, Bhubaneswar	N/A	2019	P.B. Kumar
112	Optimizing Irrigation through Environmental Canopy Sensing- A Proposed Automated Approach. International Conference on Applied Mechanics and Optimization (ICAMeO-2019), June 19th-21st, 2019, Mar Baselios College of Engineering and Technology, Kerala, India	Scopus	2019	Navsal Kumar, Arunava Poddar and Vijay Shankar

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
113	Navigation of Humanoids and Mobile Robots Using Neural Network Based Approach: A Comparative Review in The International Conference on Artificial Intelligence in Manufacturing Renewable Energy (ICAIMRE2019), Gandhi Institute for Education Technology, Baniatangi, Bhubaneswar.	N/A	2019	P.B. Kumar
114	A Comprehensive Review on Motion Planning of Bi-Differential Wheeled Robots in Cluttered Environments Using Various Artificial Intelligent Techniques in The International Conference on Artificial Intelligence in Manufacturing Renewable Energy (ICAIMRE2019), Gandhi Institute for Education Technology, Baniatangi, Bhubaneswar	N/A	2019	P.B. Kumar
115	Impact of Land Use and Climate Change on Surface Runoff Using GIS and SWAT Model: A Case Study, Roorkee Water Conclave 2020, February 26th-28th, Indian Institute of Technology Roorkee and National Institute of Hydrology, Roorkee, India, iitr.ac.in (RWC-202)	N/A	2020	Aakriti Chauhan, Suman Kumari, Md Umerjan Deva and Vijay Shankar
116	Experimental Investigation for Determining the Influence of Salt and Acid Concentrations on the Hydraulic Conductivity of Soil, Roorkee Water Conclave 2020, February 26th-28th, Indian Institute of Technology Roorkee and National Institute of Hydrology, Roorkee, India, iitr.ac.in (RWC-216)	N/A	2020	Ankush, Suman Kumari, Ram Raj Meena and Vijay Shankar
117	Application of Artificial Neural Networks for Estimating Reference Evapotranspiration in Western Himalayan, International Conference on Computational Performance Evaluation (ComPE), July 2nd – 4th, 2020	Scopus	2020	Navsal Kumar, Sajal Maharshi, Arunava Poddar and Vijay Shankar
118	Fixed point division using Newton Raphson Algorithm, International Conference on Microelectronics, Computing and Communication System (MCCS-2020) (Online), organized by IETE Advanced Regional Telecom Training Centre, BSNL Ranchi, Jharkhand, India.	N/A	2020	Pawan Kumar Pandel, Dilip Singh, RajeevanChandel
119	Biometric Based Secured Remote Electronic Voting System	N/A	2020	S. Agarwal, A. Jamwal, A. Haider, P. Dev, R. Chandel
120	Development of Single Phase Bimodal Microstructure in Bulk Ultrafine-Grained Low Carbon Steel https://doi.org/10.1016/j.matpr.2020.02.312	Scopus	2020	R.B. Singh, N.K. Mukhopadhyay, G.V.S. Sastry, R. Manna
121	Parametric Analysis of Friction Stir Welding of Pure Copper 1st International Conference. on Energy, Materials Sciences &. Mechanical Engineering - 2020. EMSME-2020. October 30 - November 01, 2020, NIT Delhi.	N/A	2020	Deepak Kaushal, Akhilesh Kumar Choudhary
122	Effect of Bioethanol Diesel Blends on Vibrations of Diesel Engine, 2nd INTERNATIONAL CONFERENCE on RECENT ADVANCES in MECHANICAL ENGINEERING (18-19th September, 2020) Delhi Technological University New Delhi	N/A	2020	Akhilesh Kumar Choudhary

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
123	Significance of remote sensing based precipitation and terrain information for improved hydrological and hydrodynamic simulation in parts of himalayan river basins, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLIII-B3-2020, 911–918, https://doi.org/10.5194/isprs-archives-XLIII-B3-2020-911-2020, 2020	Scopus	2019	P. K. Thakur, P. R. Dhote, A. Roy, S. P. Aggarwal, B. R. Nikam, V. Garg, A. Chouksey, N. Pokhriyal, M. Jani, V. Chauhan, N. Thakur, V. S. Dogra, G. S. Rao, P. Chauhan, and A. S. Kumar
124	Comparative Analysis of Cross Wired Implementation of Digital Function Design in QCA	N/A	2020	Animesh Srivastava, RajeevanChandel
125	Response surface methodology approach for combustion analysis of compression ignition engine fueled with Jatropha biodiesel produced by using heterogeneous catalyst, International Conference on Industrial and Manufacturing Systems (CIMS - 2020) 9th – 11th Oct 2020, NIT Jalandhar India	N/A	2020	A Singh, S Sinha, Akhilesh Kumar Choudhary
126	Accelerating applications of robot's in the supply chain management: A review, 2nd INTERNATIONAL CONFERENCE on RECENT ADVANCES in MECHANICAL ENGINEERING (18-19th September, 2020) Delhi Technological University New Delhi	N/A	2020	M Tripathi, Akhilesh Kumar Choudhary
127	Numerical Simulation of Heat Transfer Analysis of Nuclear Reactor Fuel Rod Assembly by Using Supercritical R-12 Coolant, published in International Conference on Industrial and Manufacturing Systems (CIMS-2020) October 09-11, 2020 at Dr. B. R. Ambedkar National Institute of Technology, Jalandhar, Punjab, India.	N/A	2020	Deepak Sharma
128	Enhancing performance of a broadband seesaw piezoelectric energy harvester," 7th International Conference on Signal Processing and Integrated Networks (SPIN), Noida, India, pp. 43-47, 2020.	N/A	2020	Prateek Asthana, Gargi Khanna
129	A Novel Step-Channel TFET for Better Subthreshold Swing and Improved Analog/RF Characteristics," 2020 IEEE International Students' Conference on Electrical,Electronics and Computer Science (SCEECS), Bhopal, India, 2020, pp. 1-6	SCI	2020	S. Kumar, D. S. Yadav, S. Saraswat, N. Parmar, R. Sharma and A. Kumar
130	Modelling of a Wide-band Piezoelectric Energy Harvester through proof mass position," in NCIASE, p. 28, 2019.	N/A	2019	Prateek Asthana, Aditya Ranjan Gargi Khanna
131	A Model of a Wideband Microscale Piezoelectric Energy Harvester for extracting ambient vibrations," in Material in Energy Conference Energy harvesting network, vol. 1, no. 1, p. 14, 2019.	N/A	2019	Prateek Asthana, Gargi Khanna
132	Novel Perspective Approach to Improve Performance of Nanowire TFET," 2020 IEEE International Students' Conference on Electrical,Electronics and Computer Science (SCEECS), Bhopal, India, 2020, pp. 1-6	SCI	2020	R. Sharma, D. S. Yadav, S. Kumar, N. Parmar, S. Saraswat and A. Kumar

Conference Papers

S. No.	Title	Conference Status [SCI/Scopus/ Web of Science]	Publication [Year]	Authorship [Author / Co-Author]
133	A wideband zinc oxide energy harvester for IoT based sensor," IEEE Zooming Innovation in Consumer Technologies Conference (ZINC), Novi Sad, Serbia, pp. 251-252, 2020.	N/A	2020	Prateek Asthana, Gargi Khanna
134	Electrical equivalent RLC Circuit modeling for energy harvester in smart city applications," in NCIASE, p. 36, 2019.	N/A	2019	Aditya Ranjan, Prateek Asthana and Gargi Khanna
135	Performance Analysis of TMG FinFETs for Low Power Application with Improved Analog/RF Characteristics," 2020 IEEE International Students' Conference on Electrical,Electronics and Computer Science (SCEECS), Bhopal, India, 2020, pp. 1-5	SCI	2020	S. Saraswat, D. S. Yadav, S. Kumar, N. Parmar, R. Sharma and A. Kumar

Awards

S. No.	Name of Faculty	Name of Organisation	Date	Award
1	Dr. Venu Shree	N/A	1/5/2019	DST Indo-US "BHAVAN" Fellowship
2	Dr. Kamlesh Dutta	3rd International Conference on Innovations in Computing held on 12-13 December 2019 at CGC College of Engineering, Mohali, India	N/A	Best Paper Award
3	Dr. Narottam Chand	IEEE	N/A	Senior Member
4	Dr. Narottam Chand	IEI	N/A	Fellow
5	Dr. Rajan Kumar	Department of Science & Technology, Govt. of India	1/11/2019	Awarded as Young Scientist to participate in 4th BRICS Young Scientist Conclave held in Rio de Janeiro, Brazil
6	Dr. Arvind K. Gautam	InSc Awards	10/11/2019	Research Excellence Award
7	Dr. Deepak Sharma	DTU	September 18-19, 2020	Best Paper Award in RAME-2020 Conference
8	Dr. Deepak Sharma	NIT Jalandhar	October 9-11, 2020.	Best Paper Award in CIMS-2020 Conference
9	Dr. Santosh Bopche	Sciencefather.com	2020	Received international best research award for the contribution and honourable achievement in innovative research
10	Dr. Rajeevan Chandel, Samarth Agarwal	7th IEEE International Conference on Smart Structures and Systems	23, 24/07/2020	Best Paper Award
11	Dr. Deepak Sharma	RAME-2020 Conference (DTU)	18-19 September 2020	Best Paper Award
12	Dr. Deepak Sharma	CIMS-2020 Conference (NIT Jalandhar)	9-11 October 2020	Best Paper Award
13	Dr. Nitin Gupta	IEEE	August 2019	Senior Member

Workshops conducted

Department of Humanities and Social Sciences, NIT Hamirpur organised seven days MHRD- IMPRESS Scheme & ICSSR New Delhi sponsored National Workshop on Research Methodology and Data Analysis (RMDA – 2019) from 24-30 June 2019. The workshop was organised for PG Students, PhD Scholars, Academicians, Practitioners and Researchers from the related areas of Social Sciences, Humanities, Management, Medical Science, Engineering and Science.

The workshop was attended by participants from Punjabi University Patiyala, University of Jammu, Central University of Rajasthan, Malaviya National Institute of Technology Jaipur, Jamia Millia Islamia University Delhi, Aligarh Muslim University, Himachal Pradesh University Shimla, National Institute of Technology Jallandhar, Central University of Himachal Pradesh and other universities across the country.

The workshop imparted the training to Understanding of Research Concepts & Methodology; choose the right statistical technique for different research questions; analyse data using basic and advanced statistical techniques in statistical software and interpret the analysis of output tables and report findings for publishing. Dr Manoj Sharma performed the responsibility of convener and coordinator of the RMDA-2019.

A three days DST sponsored workshop on "Advances in Artificial Intelligence and Machine Learning (AIML-2019)" was organized by Department of Computer Science & Engineering, National Institute Of Technology Hamirpur from 10th – 12th August 2019. The workshop aimed to provide opportunities to research scholars, faculty members and students to enrich their knowledge in the field of Artificial Intelligence, Deep Learning and Machine Learning through various lecture series and hands on technical sessions.

In this era, the computations of statistical tools via software packages is much needed and requires some formal training to the researchers. Realizing the need of statistical computing, this workshop offers hands-on training on how to do analysis through R-software, how to reproduce results through graphs and how to interpret the outcomes. The workshop gave hands-on experience in using the R program for statistics. The hands-on lab sessions were also conducted in R software.

Workshops conducted

Organized series of expert lectures on, "Energy and Environment Problems Facing the third World and their probable Solutions for Sustainable Development & Poverty Alleviation" on 05-11-2019 at 11:00 A.M and on 06-11-2019 at 09:00 A.M by Dr. D. P Kothari, Chairman BOG, THDC Institute of Hydro-Power Engineering and Technology, Tehri, Uttrakhand and former Director i/c IIT Delhi in the seminar hall of Electrical Engineering Department, NIT Hamirpur. Organized by Dr. Yog Raj Sood, Professor (HAG), Department of Electrical Engineering, NIT Hamirpur.

A Workshop organized by Department of Chemistry on "Recent Advances in Characterization of Multi-functional Materials" was held on February 17-22, 2020. Dr. K. S. Ghosh acted as the Convener and Dr. Jai Prakash was the Coordinator of the Workshop. Around 70 participants from different academic institutions have participated in the Workshop, which includes the students of PG, PhD as well as the faculty members. The PG and PhD students of NIT Hamirpur were also participated. Renowned experts working on different aspects of Material Characterization from IISER Mohali, IIT Delhi, IIT Mandi, CSIR-NPL, CSIR-IHBT as well as from NIT Hamirpur had interacted with the participants during their lecture and lab sessions.

A workshop sponsored by Ministry of Human Resource Development on ASTESTC-2020 (Advances in Sustainable Thermal Energy System: Theory & Computation was organized from 24-28 February, 2020 by the Department of Mechanical Engineering in Institute Auditorium at National Institute of Technology Hamirpur co-ordinated by Dr. Varun Goel, Dr. Laxmikant Yadav and Dr. Deepak Sharma.

A workshop sponsored by Ministry of Human Resource Development on Applications of Computational Methods in Mechanical Engineering was organized from 3-7 March, 2020 by the Department of Mechanical Engineering in Institute Auditorium at National Institute of Technology Hamirpur co-ordinated by Dr. Mohit Pant, Dr. Santosh B. Bopche.

Webinar / Seminar conducted

Webinar on National Education Policy NEP-2020

A Roadmap for its Implementation in NITs was organized by NIT Hamirpur HP conducted on 26th September 2020 by coordinators Prof. Rajeevan Chandel, Dr. Yogesh Gupta and Dr. Pamita Awasthi. Prof. Chandra Shakher, Hon'ble Chairman BOG NITH cum Prof. Emeritus IIT Delhi was the Esteemed Chief Guest. **Prof. Lalit K. Awasthi, Director NIT Hamirpur was the Guest of Honour.** Twelve learned Directors from various prestigious NITs of the country were invited as Experts for the National Online Event. The experts provided various insightful views on NEP-2020. **Prof. Chandra Shakher**, Hon'ble Chairman BOG NIT Hamirpur, emphasized the importance of viable Research & Industrial Projects to be taken up by NITs, for synergic interaction between the academia and industry for quality technical education. Technical education should benefit masses particularly in rural areas. Work beyond office hours, teach and make students work in laboratories and try to implement cutting edge technology at UG level for implementing NEP-2020. He encouraged faculty to utilize the funding opportunities provided by DST for quality research projects. The grades and CGPI scored by the students should reflect their true caliber.

Prof. Lalit Kumar Awasthi, Director, NIT Hamirpur HP cum NIT Jalandhar, spoke on holistic and multidisciplinary education system. NEP-2020 strives to re-establish India as Vishwa Guru in education. Knowledge of '64 kalas or arts' shall once again shall be taken up to makes 21st century education holistic including various soft skills, mathematical and vocational subjects, strengthen humanities, languages, applied science, management, law and arts departments. Students of Arts & humanities will get opportunities to learn more science. Digital and online classes, distance learning mode along with multiple-entry and-exit system shall be vital in making education versatile for all stakeholders. Flexible masters programmes and Major & Minor degree programs in UG level. Incubation centres in NITs shall cater to start-ups for a vibrant research atmosphere.

Prof. Rajeev Tripathi, Director, MNNIT Allahabad, discussed about quality universities and colleges: a new and forward-looking vision for India's higher education system. Multi-disciplinary courses development is an anchor node for making education vibrant, interesting and relevant in modern context. Supporting this requires departments and courses catering to IPRs, taxes, law, ethics, moral values, economics, political science and other important specializations. Teacher has to be a role model to make the education system excellent and foster original thought process and research culture.

Prof. Karunesh K. Shukla, Director, NIT Jamshedpur, provided insight in institutional restructuring and consolidation. Further, he detailed the following points regarding implementation of NEP-2020, NITs should design more flexible course curriculum. Students should be encouraged to take course from other disciplines. There should be clear understanding in NITs so that students of any NIT can opt online course being offered by other NIT with credit transfer facility. In long-run, there is a need to convert NITs into multidisciplinary institutions by way of offering programmes in Medical Engineering, Social and Community Engineering, Forensic Engineering etc. More online programme/ certificate courses to be offered. Undergraduate students to be encouraged for learning by doing and inculcate habit of innovation and research.
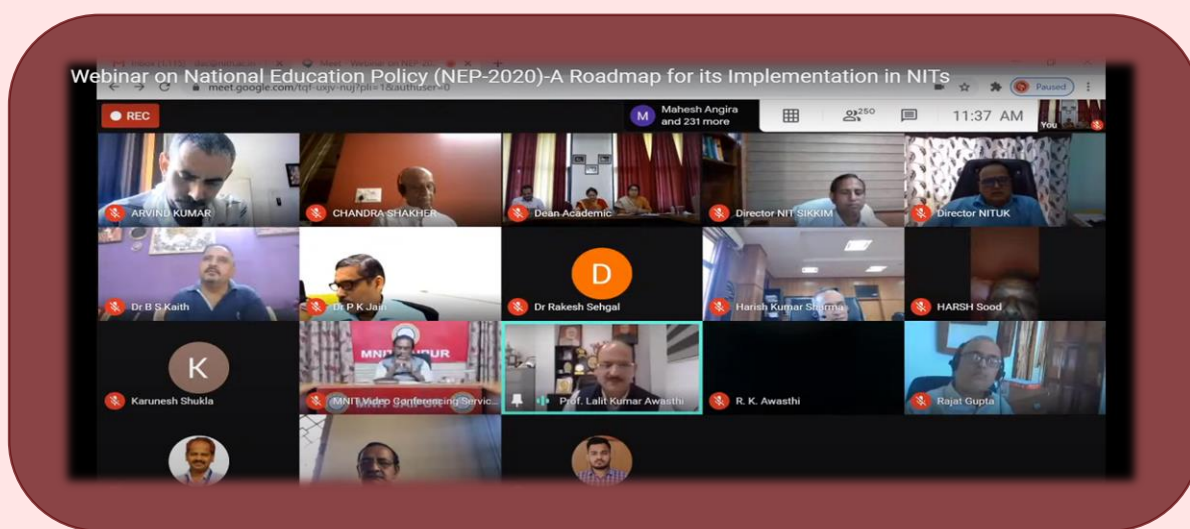
Webinar / Seminar conducted

Prof. Rajat Gupta, Director, NIT Mizoram, spoke on optimal learning environments and support for students under NEP-2020. NITs being autonomous, implementation of NEP shall be through Senates for student support and funding. It is important to test the application of knowledge, as it is outcome based education system. Cooperation & collaboration amongst NITs is essential, to overcome shortage of faculty and by sharing resources manpower & labs. NEP-2020 has opened up this opportunity through online mode. Faculty must be the centre of reforms, to take ahead the education challenges.

Prof. Shyam Lal Soni, Director, NIT Uttarakhand, discussed about motivated, energized and capable faculty. Supporting teacher preparation and professional development for pandemic and teaching. Digitalized pedagogy, virtual labs, enhancing educational access. Aatmnirbharta is the key to research and innovation to support local community and further make India lead globally through education system.

Prof. Pradip K. Jain, Director, NIT Patna, elaborated on equity and inclusion in higher education. Gap between females and males, 'especially abled students' needs to be balanced, social under-privileged, financial support, leaving no one behind. More time needs to be provided for research, creative and critical thinking to students. High quality research work is the need to uplift society and for societal benefits. India always has education at the centre of its agenda. Inclusive environment is essential, imbibing respect, human values, tolerance, students empowered and respect diversity and sustainable development. Students have to become thought leaders, by sharing of the responsibility by faculty, staff, students- all need to be committed. NITs have to collaborate with campus partners, develop a sense of belonging in engineering spaces.

Prof. H. K. Sharma, Director, NIT Agartala, highlighted on re-imagining vocational education. An output based vocational training and education, suitable for an individual and the society. Multi-exit education system, with certificate, diploma, degree, needs a revised curriculum and syllabus. It should be suitable to the industry requirements. Placement aspects have to be looked into regarding our courses. We excel in IT, design, as students have access and exposure to ICT and softwares.

Prof. Rakesh Sehgal, Director, NIT Srinagar (J&K), elaborated online and digital education. NITs should make suitable amendments in the academic regulations at UG and PG level to enforce 20-25% credit earning by the students through online platforms. The issues such as relevance of these courses, registration fee and examination fee for such courses have to be deliberated in Senate for its proper implementation. In view of the increased significance of Coding due to the online mode of most of the services, students at UG level have to be encouraged to credit at least one application coding language through an online platform irrespective of their branch of study. While framing UG curriculum, due weightage must be given to courses related to cyber security so as to create cyber security experts in different areas of Education, Banking, Defense, Aviation industry. A national common pool of online resources such as Journals, E-Books and learning resources needs to be created by MOE for all NITs. This will need discussion at NIT Council level. Prof. N.V. Ramana Rao, Director, NIT Warangal, provided insight into transforming the regulatory system of higher education, particularly the research perspectives.

Webinar / Seminar conducted

NITs have to expand research and innovation, skill development, IPRs, start-up policy. NITs have to become research intensive institutes by industry collaborations, establishment of centres of excellence. Encourage faculty and student research which should focus on customer needs, strengthen the infrastructure of labs. Allow student internships and credit transfer mechanism to students. Organize student events based on societal problems. Enable online teaching by foreign faculty and utilization of Govt. funding schemes to tap best experts.

Prof. U. R Yaragatty, Director MNIT Jaipur, spoke on effective governance and leadership for higher education institutions. Branding the NITs, as research and teaching institutes. Students, researchers, faculty, staff all have to work for excellence of any technical institute. Positive attitude and sense of belongingness my institute has to be strong. Wherever we work with synergy there is energy. Students of NITs have to work for the country. All facilities and rules and regulations are there, good leadership i.e. BOG, Director, Deans, Coordinators & faculties make a difference in good governance. He emphasised the contributions of great Indian gurus and scientists like Aryabhatta, Rishi Agastya, Rishi Bharadwaj. Re-establishment comes with good governance to make our NITs superior institutes. Accountability of each one who is a part and parcel of the Institute has to be high, for good governance, to make an excellent technical institute. **Prof. Mahesh C. Govil**, Director NIT Sikkim, discussed catalysing quality academic research in all fields through a new national research foundation. Knowledge creation, quality education and research need to be addressed in true spirit. Training and research exposure to faculty and tie-up with research organizations is required. Continuous research effort has to be made. Identification of talent in the institute and clustering of NITs for collaborative cutting edge and high end research problems need to be initiated.

More than 600 participants- faculty and students from all over India witnessed the event and got enlightened about NEP-2020 for Higher Education and the strategies suggested by experts for its Implementation in NITs. The NEP-2020 webinar YouTube link is: https://www.youtube.com/watch?v=m9M4t1jL7Bc&feature=youtu.be

Seminar on VLSI Design & Fabrication was organized for PG/ PhD students and faculty under SMDP-C2SD project by Prof. Rajeevan Chandel as Coordinator. **Er. H.S. Jatana, Head Fab Process, SCL (Dept of Space, under ISRO) SAS Nagar Mohali (Pb)** was the main expert of the Seminar which was organized by **E&CE Department, NIT Hamirpur** on 24th April 2019.

National Programs like GIAN etc. conducted

Molecules to human: Application of multidimensional NMR in deciphering bio molecular structures, functions and cellular mechanism 2-7 December, 2019 Web Studio, Central Block at NIT-Hamirpur MHRD-GIAN, Coordinator: Dr. Pamita Awasthi

This course covered all major aspects (Principles/Instrumentations/Applications) of multi-dimensional NMR methods such as [1H, 13C, 15N] resonance COSY, NOESY, SECSY, TOCSY, and TROSY with applications in deciphering bio molecular structures and mechanisms, and cellular metabolism and functions. Applications of NMR in cancer metabolomics and drug metabolism were also covered in this course.

Further, applications of NMR in regulation of gene expression were presented in this course for molecular understanding of the most essential biological process and therapeutic development, since gene expression is central to all cellular processes and functions, and misregulation of gene expression is associated with a growing number of human diseases including various types of cancers.

Faculty Development Programmes conducted

Department of Humanities & Social Science and Department of Computer Science, NIT Hamirpur organizing the Seven Day's Faculty Development Programme on Universal Human Values and Professional Ethics which is sponsored by All India Council for Technical Education, Government of India from 22-28 June 2019. FDP was organized for Faculty, Research scholar and P.G Students room the related areas of Social Sciences, Humanities, Management, Medical Science, Engineering and Science. one of the key aim of FDP was to train Faculties in Human values so they can organized student Induction Program in their respective institutions. FDP was attended by participants from all over the Country. Dr. Sunder Kala Negi and Dr. Dharmendra Prasad Mahato was joint coordinator of this Seven Day's Faculty Development Programme on Universal Human Values and Professional Ethics.

A National-NKN FDP on "Antenna Trends" was organized from 01 - 05 July, 2019, held at Department of ECE, NIT Hamirpur, Sponsored by "E&ICT Academy, IIT Guwahati" coordinated by Dr. Dharmendra Yadav, Dr. Saurabh Kumar and Dr. Manoranjan Rai Bharti.

A Two-Week DST (ICPS Division) sponsored Faculty Development Programme on "Block Chain Technologies and It's Applications (BCTA-2019)" was organized by Department of Computer Science & Engineering, National Institute Of Technology Hamirpur from 7th – 18th July 2019. The workshop aimed to provide opportunities to research scholars, faculty members, and students to enrich their knowledge in the field of Cryptography, Distributed System, Cryptocurrency, Blockchain Mining, Advances in Blockchain and its Applications, through various lecture series and hands on technical sessions. The participants are attended from the various universities like IIT's, NIT's, and Central funded universities across the India.

Dr. Saurabh Kumar organized National FDP (Sponsored by IRDT Kanpur UP) on "Future Aspect of Electronics and Digital Learning" , at National Institute of Technology Hamirpur, form 16/09/2019 to 21/09/2019, as Coordinator.
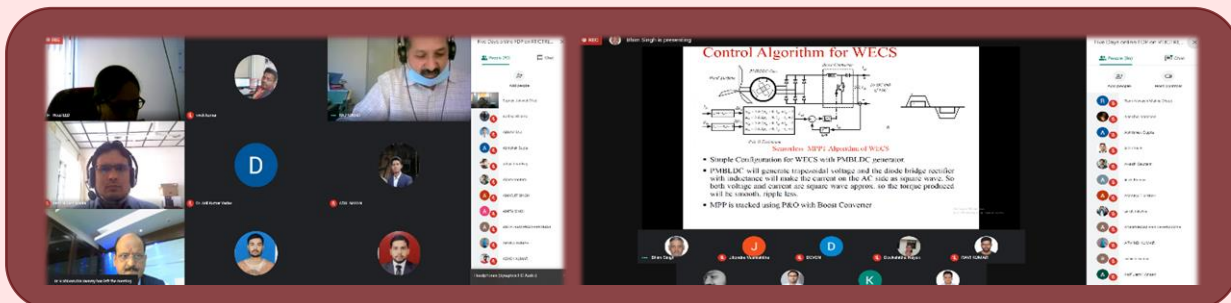
Faculty Development Programmes conducted

One week faculty development programme on "Research Trends in Artificial Intelligence and Mobile Systems (RTAIMS-2019)" organized by Department of Computer Science & Engineering, National Institute of Technology Hamirpur from 16-21 December 2019. The FDP aimed to provide opportunities to research scholars, faculty members and postgraduate students to enrich their teaching skills and research in the field of Artificial Intelligence, Machine learning and Mobile Systems. The aim of the programme was to develop the knowledge of current research domains in relevant field to improve the learning and monitoring their progress.

The five days online Faculty Development Program on "Recent Trends in Intelligent Control Techniques for Renewable Energy Systems and Electric Vehicles" was conducted by Department of Electrical Engineering, National Institute of Technology Hamirpur (H.P.) from 12- 16 October 2020. The online FDP was coordinated by Dr. Ram Niwash Mahia and Dr. Supriya Jaiswal, Assistant Professor(s), Department of Electrical Engineering. The objective of the e-FDP 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 recent developments in the intelligent control techniques in renewable energy systems and electric vehicles. The theme of this e-FDP fulfilled the goal of providing exposure to both conventional and recent advancements in renewable energy systems and electric vehicles. The program witnessed a huge participation from different states of the country having total 83 participants among which 15 were academicians and rest were research scholars from different institutes/colleges/universities. Total 14 technical sessions were conducted in five days consisting of 14 eminent speakers for each session.

Department of Humanities & Social Sciences and Electronic & Communication Department, NIT Hamirpur organised five days online Faculty Development Programme on Emotional Intelligence which is sponsored by AICTE Training and Learning Academy from 19-23 October, 2020. FDP was organized for Faculty, Research scholar and P.G Students room the related areas of Social Sciences, Humanities, Management, Medical Science, Engineering and Science. The objective of this online Five days FDP is to impart essential knowledge of components related to emotional Intelligence such as self and social awareness along with self and relationship management required in professional and personal life. Online FDP was attended by participants from all over the Country. Dr. Sunder Kala Negi and Dr. Dharmendra Singh Yadav was joint coordinator of this Five Day's Faculty Development Programme on Emotional Intelligence.
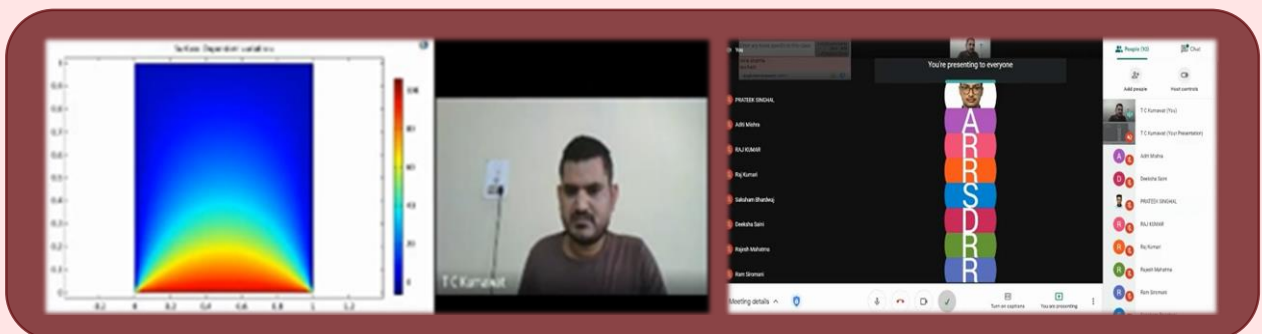
Short Term Courses conducted

A Short Term Course was started on 9th December 2019 with an inaugural speech of honourable chief guest Prof. Vinod Yadava, Director, NIT Hamirpur. Overview of the workshop was given by Dr. Abhishek Singh (Coordinator), Assistant Professor, NIT Hamirpur. Vote of Thanks was given by the Dr. R.K. Vats (Convener), Associate Professor, NIT Hamirpur. Prof. A.A. Khan, Chairman, Department of Statistics and Operations Research, AMU, Aligarh and Dr. P.K. Sharma, Head, Department of Mathematics and Scientific Computing, NIT Hamirpur were also present at the inaugural function

STP on "Future Aspect of Electronics and Digital Learning", 16-21 September 2019, at Department of ECE, NIT Hamirpur, sponsored by IRDT Kanpur U.P as a joint coordinator with Dr Saurabh Kumar.

A short term training program on "COMSOL Multiphysics in Engineering Applications" from 1st-31st October, 2020 was conducted. Prof. Lalit Kumar Awasthi, Director, NIT Hamirpur graced the inagural session as Chief Guest. Dr. Tara Chand Kumawat, Coordinator and Dr. Tapas Palai, Head, Department of Chemical Engineering was also present during the inagural session. During the entire program, the software trial, models, and task clarity provided by COMSOL personnel . The whole training program is divided into two part. Part-I: A 31 days software trail for the participants. During the first week some pre-recorded videos circulated to learn the basics of the software. During the second week of the program, participants learned to make and simulate a simple model in COMSOL Multiphysics and Hands on training session (approx. 2 hrs) carried out by COMSOL experts. Part-II: During the third week of the program, relatively complex models developed through step-by-step guidance. During the fourth week, participants can develop the model as per their requirements.

Short Term Courses conducted

A five day e-short term course, Machine Learning for Natural Language Processing (MNLP-2020), was organized during 12-17th October. A combination of lectures, case studies, were delivered in the sessions to cover the ML, DL, NLP and its applications application such as Machine Translation, Information Retrieval, Sentiment Analysis, etc. which is helpful for the academia and industry person to serve the mankind in better way by reducing the communication between man and machine.

A five day e STC was organized by Department of Management Studies, NIT Hamirpur from 26-30 October 2020. The e-STC was coordinated by Dr. Richa Joshi), the course received a good participation of research scholar and faculty from different colleges and institutions of the country. The response of participants was overwhelming and speakers kept the participants engaged with several hands-on tools and conceptual knowledge. The speakers were from various institute of repute like IIM Sirmaur, IIM Vishakhapatnam, IIT Roorkee, IIIT Lucknow, MNIT Allahabad, Delhi Technological University and Delhi University.

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. Total 70 participants from various organizations were participated.

Text / Reference Book Published

S. No.	Title of the book with ISBN	Name (s) of the Author (s)	Year of Publication	Publisher
1	Hand book of Mechanical Engineering, ISBN: 978-93-86648-44-0	Debasish Das	2020	DBS Imprints
2	Diagnostic Applications of Health Intelligence and Surveillance Systems,9781799865278	Divakar Yadav, Abhay Bansal, Madhulika Bhatia, Madhurima Hooda, Jorge Lara	2021	IGI Global
3	Wireless Sensor Networks: Issues and Challenges in Current Scenario, Print ISBN: 978-3-030-40304-1, Online ISBN: 978-3-030-40305-8	Pradeep Kumar Singh, Bharat K. Bhargava, Marcin Paprzycki, Narottam Chand and Wei-Chiang Hong,	2020	Springer
4	Soft Computing Based Dependability Analysis For On-Demand Computing,SBN-13: 978-620-0-00687-5, ISBN-10: 6200006873	Dharmendra Prasad Mahato and Ravi Shankar Singh	2019	LAP LAMBERT Academic Publishing
5	Distributed Artifcial Intelligence: A Modern Approach, ISBN: 978-0-367-46665-7	Satya Prakash Yadav, Dharmendra Prasad Mahato and Nguyen Thi Dieu Linh	2020	CRC Press - Taylor & Francis Group, LLC, Work In Progress, Accepted on 21st November 2019
6	Intensity Based Medical Image Registration, ISBN: 978-3-659-81777-9	Nagendra Pratap Singh, Rajeev Srivastava	2019	LAMBERT Academic Publishing, Germany
7	Basic Principles of an Operating System, ISBN 978-93-88511-71-1	Priyanka Rathee	2019	BPB
8	E-learning Methodologies: Fundamentals, Technologies and Applications, ISBN: 978-3-030-37051-0_102	Mukta Goyal, K. Rajalakshmi, Divakar Yadav	2019	Institute of Engineers and Technology (UK)
9	Application of Computing, Automation and Wireless Systems in Electrical Engineering (vol.1 & vol. 2), ISBN 978-981-13-6771-7, DOI 10.1007/978-981-13-6772-4.	Sukumar Mishra, Yog Raj Sood, Anuradha Tomar	2019	Springer Nature Singapore Pte Ltd.
10	Application of Artificial Intelligence Technique in Engineering (vol.1 & vol. 2), ISBN 978-981-13-1818-4, DOI 10.1007/978-981-13-1819-1,	Hasmat Malik, Smriti Srivastava, Yog Raj Sood, Aamir Ahmad,	2019	Springer Nature Singapore Pte Ltd.
11	Electricity Pricing in Restructured Electrical Power Sector, ISBN No: 978-93-87901-12-4	Abhas Kumar Singh, Dr. Yog Raj Sood, Dr. R K Jarial	2020	Novateur Publication Pune, Maharashtra, India
12	The Textile Industry and Exports in Post-Liberalization India. ISBN: 9781138347243	Rahul Dhiman Manoj Sharma	2020	Routledge, Taylor & Francis Ltd
13	VLSI and Post-CMOS Electronics- Design, Modelling and Simulation,Volume 1, ISBN-13: 978-1-83953-051-7	Rohit Dhiman, Rajeevan Chandel	2019	IET, Stevenage, England (UK)
14	VLSI and Post-CMOS Electronics- Design, Modelling and Simulation, Volume 2, ISBN-978-1-83953-054-8	Rohit Dhiman, Rajeevan Chandel	2019	IET, Stevenage, England (UK)
15	Nanoscale VLSI- Devices, Circuits and ApplicationsPrint ISBN- 978-981-15-7936-3, Online. ISBN-978-981-15-7937-0	Rohit Dhiman, Rajeevan Chandel	2020	Springer, Singapore
16	The DBS Handbook of Wind and Earthquake Engineering: Structural Analysis and Design ISBN: 978-93-86648-49-5	S.K. Verma, Amrit Kumar Roy	2020	Printed in India by Thomson Press, DBS Imprints

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	Crystallins and their complexes	Ghosh, K. S., Chauhan, P.	Macromolecular Protein Complexes II: Structure and Function	Harris, J. R., Marles-Wright, J.	2020	Springer
2	Fluorescent nanomaterials for cellular imaging	Ghosh K. S., Sharma, A.	Fluorescence Methods for Investigation of Living Cells and Microorganisms	Grigoryeva, N.	2020	Intech Open
3	Performance, Emissions, and Combustion Evaluations of a Diesel Engine Fuelled with Biodiesel Produced from High FFA Crude Mahua (Madhuca longifolia) Oil	A. Hira, D. Das, R. Thakur,	Introduction to Diesel Emissions	Richard Viskup	2020	Intech Open
4	On the Security Weaknesses in Password-Based Anonymous Authentication Scheme for E-Health Care	Rifaqat Ali, Preeti Chandrakar, Aashish Kumar	Design Frameworks for Wireless Networks	Santosh Kumar Das, Sourav Samanta, Nilanjan Dey, Rajesh Kumar	2020	Scopus
5	Register-Transfer-Level Design for Application-Specific Integrated Circuits	Dilip Singh, Rajeevan Chandel	Nanoscale VLSI-Devices, Circuits and Applications	Rohit Dhiman, Rajeevan Chandel	2020	Springer, Singapore
6	Emerging Graphene FETs for Next-Generation Integrated Circuit Design	Yash Agrawal, Eti Maheshwari, Mekala G. Kumar, Rajeevan Chandel	Nanoscale VLSI-Devices, Circuits and Applications	Rohit Dhiman, Rajeevan Chandel	2020	Springer, Singapore
7	Gallium Nitride—Emerging Future Technology for Low-Power Nanoscale IC Design	Sahil Sankhyan, Tarun Chaudhary, Gargi Khanna, Rajeevan Chandel	Nanoscale VLSI-Devices, Circuits and Applications	Rohit Dhiman, Rajeevan Chandel	2020	Springer, Singapore
8	Prospective current mode approach for on-chip interconnects in integrated circuit designs	Yash Agrawal, Mekala G. Kumar Rajeevan Chandel, Rutu Parekh	VLSI and Post-CMOS Electronics- Materials, Circuits and Devices	Rohit Dhiman, Rajeevan Chandel	2019	IET, Stevenage, England (UK)

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
9	Performance Analysis of Mixed-Wall CNT Interconnects Using Colliding Bodies Optimization Technique	Girish Kumar Mekala, Yash Agrawal, Rajeevan Chandel, Ashwani Kumar Chandel	Major Applications of Carbon Nanotube Field-Effect Transistors (CNTFET)	Mamta Khosla, Bal winder Raj, Aman deep Singh	2020	IGI Global
10	Solving Multi-Choice Fractional Stochastic Transportation Problem involving Newton's Divided Difference Interpolation	Prachi Agrawal and Talari Ganesh	Numerical Optimization in Engineering and Sciences, Advances in Intelligent Systems and Computing	Debashis Dutta, Biswajit Mohanty	2020	Scopus
11	Inferential Aspects of Double Truncated Generalized Gaussian distribution	Talari Ganesh and Anitha kumari Kattamanchi	Soft Computing: Theories and Applications, Advances in Intelligent Systems and Computing	M Pant, TK Sharma, OP Verma, R Singla, A Sikander	2020	Scopus
12	Soft Computing Based Dependability Analysis For On-Demand Computing	N/A	N/A	N/A	N/A	N/A
13	"AoSP-Based Secure Localization for Wireless Sensor Network DOI: 10.4018/978-1-7998-0373-7.ch005,	Ankur Shrivastava, Nitin Gupta, and Shreya Srivastav	Security and Privacy Issues in Sensor Networks and IoT, IGI	Priyanka Ahlawat and Mayank Dave	2019	Global
14	Detection and Tracking of Mobile Intruder in Harsh Geographical Terrains using Surveillance Wireless Sensor Networks	Anamika Sharma and Siddhartha Chauha	N/A	N/A	2020	Springer
15	Harmony Search and Nature Inspired Optimization Algorithms. Advances in Intelligent Systems and Computing vol. 741	Rajesh Kondabala , Vijay Kumar	Computational Intelligence Tools for Protein Modeling.	Yadav N., Yadav A., Bansal J., Deep K., Kim J.	2019	Springer
16	Harmony Search and Nature Inspired Optimization Algorithms. Advances in Intelligent Systems and Computing vol. 741	Gaurav Dhiman, Vijay Kumar	Spotted Hyena Optimizer for Solving Complex and Non-linear Constrained Engineering Problems.	Yadav N., Yadav A., Bansal J., Deep K., Kim J.	2019	Springer

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
17	Chapter 6 in Handbook of Research on Deep Learning Innovations and Trends	Sahil Sharma, Vijay Kumar	Transfer Learning in 2.5D Face Image for Occlusion Presence and Gender Classification	N/A	N/A	N/A
18	Automatic Text Summarization Techniques Used in Industry	Mukesh Kumar Kharita, Pardeep Singh	N/A	N/A	N/A	Springer
19	On Scheduling Transaction in Grid Processing System Considering Load Using Fuzzy Ant Colony Optimization.	Dharmendra Prasad Mahato	Proceedings of the 34th International Conference on Advanced Information Networking and Applications	L. Barolli et al.	2020	AINA 2020
20	Cognitive Radio Networks: A Comprehensive Review	Nitin Gupta, Sanjay K. Dhurandher, Bhoopendra Kumar	N/A	N/A	2019	IGI Global
21	Embedded Sensors in U-Healthcare	P K Bhagat and Prakash Choudhary	N/A	N/A	N/A	Elsevier
22	Cooperative Caching in Wireless Multimedia Sensor Networks	Pushpender Kumar Dhiman, Narottam Chand, Naveen Chauhan and Rajeev Kumar	Research on the IoT, Cloud Computing and Wireless Network Optimization	Surjit Singh and Rajeev Mohan Sharma	2019	IGI Global
23	Privacy Aware Prevention of Sybil Attack in Vehicular Ad Hoc Networks	Rajeev Kumar, Naveen Chauhan, Pushpender Kumar, Narottam Chand, Adil Umar Khan	Wireless Sensor Networks: Issues and Challenges in Current Scenarios	Pradeep Kumar Singh, Bharat K. Bhargava, Marcin Paprzycki, Narottam Chand and Wei-Chiang Hong	2020	Springer
24	Data Caching at Fog Nodes Under IoT Networks: Review of Machine Learning Approaches	Riya, Nitin Gupta, Qin Xin	N/A	N/A	2020	CRC Press, USA

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
25	AoSP Angle of Signal Propagation Based Secure Localization Method for Wireless Sensor Network	Ankur Shrivastav, Nitin Gupta, Shreya Shrivastav	N/A	N/A	2019	IGI Global
26	Performance analysis of biodiesel in compression Ignition Engine	Awasthi, M. and Hans Kumar	Alternative Fuels as Sustainable Solution for Internal Combustion Engines	Dr. Akhilendra Pratap Singh and Prof. Avinash Kumar Agarwal	2020	Springer Nature
27	A Hybrid Framework for Fault Classification and Location in Power Distribution System Using Wavelet and Support Vector Machine	Panigrahy S., Chandel A.K.	Innovation in Electrical Power Engineering, Communication, and Computing Technology	N/A	2020	Springer
28	Techno-economic Assessments of Green Hybrid Microgrid	Sumit Sharma, Yog Raj Sood, Ankur Maheshwari	Recent Advances in Power Systems	H. O. Gupta, V. K. Sood	2020	Springer Link
29	Techno-Economic and Environmental Evaluation of Producer Gas-Based IC Engine in a Hybrid Energy System. A Hybrid Framework for Fault Classification and Location in Power Distribution System Using Wavelet and Support Vector Machine	Prashant Malik and Awasthi, M. (2020).	Alternative Fuels as Sustainable Solution for Internal Combustion Engines	Dr. Akhilendra Pratap Singh and Prof. Avinash Kumar Agarwal	2020	Springer Nature
30	Thermal Aging Analysis of Nomex Paper Solid Insulation Impregnated in Ester Insulation Oil for Possible Use in Transformer	Rajesh Roshan, Manisha Sharma, R. K. Jarial	Intelligent Computing Applications for Sustainable Real-World Systems	N/A	2020	Springer
31	Design and Techno-Financial Analysis of Solar Photovoltaic Plant for School of Engineering & Technology at BGSB University Rajouri (J&K)	Shafqat Nabi Mughal, Yog Raj Sood, R. K. Jarial	Applications of Computing, Automation and Wireless Systems in Electrical Engineering	Sukumar Mishra, Yog Raj Sood and Anuradha Tomar	2019	Springer
32	Chapter Introduction to Condition Monitoring of Mechanical Systems	Akhilesh K. Choudhary, Dilshad Ahmad Khan	Chapter Introduction to Condition Monitoring of Mechanical Systems	N/A	2020	Springer Nature Singapore Pte Ltd

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 Publica tion	Publisher
33	A comparative Analysis of different maximum Power Point Tracking Algorithms of Solar Photovoltaic Systems	Md. Sabir Hassan, Shafqat NABI Mughal, R. K. Jarial, Yog Raj Sood	Applications of Computing, Automation and Wireless Systems in Electrical Engineering	N/A	2019	Springer
34	Emerging Green Energy Potential: An Indian Perspective	Jasmine Kaur, Yog Raj Sood, Rajnish Shrivastava	Applications of Computing, Automation and Wireless Systems in Electrical Engineering	N/A	2019	Springer
35	Performance Analysis of Classical Controllers Tuned Using Heuristic Approaches for Frequency Regulation	Preeti Dahiya, Sandeep Dogra, Veena Sharma, Harish Pulluri, N. Gouthamkumar and U. Mohan Rao	Applications of Computing, Automation and Wireless Systems in Electrical Engineering	N/A	2019	Springer
36	Chapter Investigation of Humanoid Movement using Classical Approach	P.B. Kumar, A. Chhotray, K.K. Pandey, D.R. Parhi	Chapter Investigation of Humanoid Movement using Classical Approach	N/A	2019	Apple Academic Press
37	Effective Control Strategy in Microgrid	Ankur Maheshwari, Yog Raj Sood, Aashish Goyal Mukesh Singh Sumit Sharma	Algorithms for Intelligent Systems. book series (AIS)	Geetam Singh Tomar Narendra S. Chaudhari Jorge Luis V. Barbosa Mahesh Kumar Aghwariya	2020	Springer Link
38	Emerging Green Energy Potential: An Indian Perspective	Jasmine Kaur, Yog Raj Sood, Rajnish Shrivastava	Applications of Computing, Automation and Wireless Systems in Electrical Engineering	Sukumar Mishra, Yog Raj Sood and Anuradha Tomar	2019	Springer
39	Conceptualizing a Link Literature: Few Issues in Translation	Manoj Kumar Yadav	Scintilating Showers	K. Usha Sharma	2019	N/A

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
40	Renewable Energy Management in Multi-microgrid Under Deregulated Environment of Power Sector	Om Prakash Yadav, Jasmine Kaur, Naveen Kumar Sharma, Yog Raj Sood	Applications of Artificial Intelligence Techniques in Engineering	Hasmat Malik, Smriti Srivastava, Yog Raj Sood, Aamir Ahmad	2019	Springer
41	A Proposal for Evaluating the Clearness Index Based on Extra Terrestrial Radiations at a Given Site	Mughal S.N., Sood Y.R., Jarial R.K.	Intelligent Techniques and Applications in Science and Technology	Subhojit Dawn, Valentina Emilia Balas, Anna Esposito, Sadhan Gope	2020	Springer
42	A Proposal to Regulate Frequency in Deregulated Power System Using Unscheduled Interchange Tariff	Shafqat Nabi Mughal, Yog Raj Sood	Intelligent Techniques and Applications in Science and Technology	Subhojit Dawn, Valentina Emilia Balas, Anna Esposito, Sadhan Gope	2020	Springer
43	Examining Causal Linkages for Sustainable Development: A Literature Review	Ritu Rana, Manoj Sharma and Mir Sayed Shah Danish	Eco-Friendly Energy Processes and Technologies for Achieving Sustainable Development	Mir Sayed Shah Danish	2019	N/A
44	Advances in Engineering Design	Akant Kumar Singh, Siddhartha, Sanjay Yadav and Prashant Kumar Singh	Advances in Engineering Design	N/A	2019	Springer Nature Singapore Pte Ltd.
45	Hierarchical Composite Materials, Manufacturing, Engineering	Akant Kumar Singh, Siddhartha, Prashant Kumar Singh	Hierarchical Composite Materials, Manufacturing, Engineering	N/A	2019	De Gruyter
46	Chapter Path Planning of a Humanoid Robot Using Rule Based Technique	M.K. Muni, P.B. Kumar, D.R. Parhi, A.K. Rath, H.C. Das, A. Chhotray, K.K. Pandey, K. Salony	Chapter Path Planning of a Humanoid Robot Using Rule Based Technique	N/A	2020	Springer

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
47	Chapter Design and Development of Improved Ball End Magnetorheological Finishing Tool with Efficacious Cooling System	Dilshad Ahmad Khan, ZafarAlam, FaizIqbal and Sunil Jha	Chapter Design and Development of Improved Ball End Magnetorheological Finishing Tool with Efficacious Cooling System	N/A	2020	Springer Nature Singapore Pte. Ltd.
48	Chapter Part Program-Based Process Control of Ball-End Magnetorheological Finishing	Faiz Iqbal, ZafarAlam, Dilshad Ahmad Khan and Sunil Jha	Chapter Part Program-Based Process Control of Ball-End Magnetorheological Finishing	N/A	2020	Springer Nature Singapore Pte. Ltd.
49	Determinants of RFID Adoption Intention in Healthcare Industry for patient monitoring- A Special Reference to COVID-19 in India	Bijoylaxmi Sarmah, Neeraj Kumar Phookan	Cyber-Physical Systems for COVID-19	Sandeep Poonia	2020	Elsevier
50	Performance Evaluation of Four Models for Estimating the Capillary Rise in Wheat Crop Root Zone considering Shallow Water Table.	Arunava Poddar, Navsal Kumar, & Vijay Shankar	Hydrological Extremes, River Hydraulics and Irrigation Water	Pandey, A., Mishra, S.K., Kansal, M.L., Singh, R.D., Singh, V.P.	2020	Springer
51	Nonlinear Regression for Identifying the Optimal Soil Hydraulic Model Parameters.	Navsal Kumar, Arunava Poddar, Vijay Shankar	Numerical Optimization in Engineering and Sciences.	Dutta D., Mahanty B.	2020	Springer
52	Scheduling Shuttle Ambulance Vehicles for COVID-19 Quarantine Cases, A Multi-objective Multiple 0-1 Knapsack Model with A Novel Discrete Binary Gaining-Sharing knowledge-based Optimization Algorithm	Said Ali Hasan, Prachi Agrawal, Talari Ganesh and Ali Wagdy Mohamed	Multi-Objective Combinatorial Optimization Problems and Solution Methods	Mehdi Toloo	2020	Scopus
53	Printed Antennas Theory and Design	A. Bage and S. K. Gupta	Radiation Pattern Agility of Printed Antennas	Binod Kumar Kanaujia, Surendra Kumar Gupta, Jugul Kishor, Deepak Gangwar	2020	CRC Press Taylor & Francis Group

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
54	Determinants of RFID Adoption Intention in Healthcare Industry for patient monitoring- A Special Reference to COVID-19 in India	Bijoylaxmi Sarmah, Neeraj Kumar Phookan	Cyber-Physical Systems for COVID-19	Sandeep Poonia	2020	Elsevier
55	Gallium Nitride—Emerging Future Technology for Low-Power Nanoscale IC Design, pp. 163-171, 2020.	Sahil Sankhyan, Tarun Chaudhary, Gargi Khanna and Rajeevan Chandel	Nanoscale VLSI. Energy Systems in Electrical Engineering	Dhiman R., Chandel R.	2020	Springer, Singapore
56	Finite Element Modeling of a Wideband Piezoelectric Energy Harvester for Ambient Vibration Extraction, pp. 549-556, 2020	Prateek Asthana, Apoorva Dwivedi, and Gargi Khanna	Advances in VLSI, Communication, and Signal Processing	N/A	2020	Springer, Singapore
57	Effect of Micro Lever width on the mechanical sensitivity of a MEMS Capacitive Accelerometer, pp. 525-532, 2020.	Apoorva Dwivedi, Prateek Asthana and Gargi Khanna	Advances in VLSI, Communication, and Signal Processing	N/A	2020	Springer, Singapore
58	Development of Vibration Piezoelectric Harvesters by the Optimum Design of Cantilever Structures, ISBN 978-1-83881-060-3	Prateek Asthana and Gargi Khanna	Nanogenerator	N/A	2020	Intech-Open

MOU signed with National and International Organizations

Sr. No.	Name of the party with whom MoU signed	Date of signing the MoU
1	Sardar Vallabhbhai Patel Cluster University Mandi	22-10-2020
2	Dharamshala Smart City Ltd. at Dharamshaia, Distt. Kangra H.P.	29-09-2020
3	National Highways Authority of India (NHAI)	26-08-2020
4	Rajiv Gandhi Government Engineering College Kangra at Nagrota Bagwan Distt Kangra (HP) 176047	06-01-2020
5	CSIO, Chandigarh, Punjab	11-11-2019
6	National Power Training Institute (NPTI), Sector 33, Faridabad, Haryana – 121003	07-09-2019
7	Semi-Conductor Laboratory, Department of Space, GOI, SAS Nagar, Mohali-Punjab	19-08-2019
8	Indian Institute of Technology, Roorkee	17-06-2019
9	E&ICT Academy, Roorkee	20-05-2019

Significant outreach Institute out Activities

S. No.	Name of Activity	Duration of Activity
1	Expert Talk Delivered of FDP on "Advances in Engine Combustion and Emission Diagnostics" held at the Department of Mechanical Engineering, NIT Andhra Pradesh.**(Dr. Debashish Das)**	5-9 October, 2020.
2	Certificate of Reviewer , Journal of Building Engineering, Elsevier **(Dr. Vandna Sharma)**	1 April, 2019
3	Lectures delivered on "Learning in R: optimization and linear regression" at ITCOD 2019, Chitkara University, Rajpura, Punjab **(Dr. Abhishek Singh)**	17-18 May, 2019
4	Lectures delivered on "Reliability and validity of measurements" at RMDA 2019, NIT Hamirpur, (H.P.) **(Dr. Abhishek Singh)**	24-30 June, 2019
5	Lectures in More than 20 Schools Under Rashtriya Aviskar Abhiyan and Coordinated visit of Students from 20 schools to NIT Hamirpur under Abhiyan. **(Dr. Pawan Sharma)**	January-February 2020
6	Invited talk on "An introduction to Element Free Galerkin Method and its Application" at National institute of technology Srinagar, Uttarakhand, India. **(Dr. Rajesh Sharma)**	28 February, 2020
7	Delivered in South Asian University, New Delhi. **(Dr. R K Vats)**	15 December, 2019
8	Talk on "Linear, Nonlinear and Logistic Regression using R" in short-term course on Statistical Techniques using R softwares organized by Department of Mathematics & Scientific Computing, NIT Hamirpur. **(Dr. Talari Ganesh)**	9-14 December, 2019
9	Invited lecture on "Estimation of Early stage of Parkinson's Disease using Machine Learning Techniques" in workshop on Workshop on Data Science for a Growing Nation on the eve of 13th National Statistics Day organized by Department of Statistics, Sri Venkateswara University, Tirupati. **(Dr. Talari Ganesh)**	29 June – 1 July 2019
10	Delivered a talk on Smart Healthcare Applications at BIT's 6th Annual Congress of InfoTech 2019 held at Nanjing, China. **(Dr. Nidhi Gupta)**	10-11 May, 2019
11	Delivered an Expert talk on TEQIP-III Sponsored FDP on Data Analytic Technique for Research and Innovation and their Advancement, Introduction to AI for Data Analytics, VIT Jaipur, India. **(Dr. Nidhi Gupta)**	29 August – 2 September, 2020
12	Won First Prize in Hindi Pakwada Self-Written hindi Poem Recitation at NIT Hamirpur, India, **(Dr. Nidhi Gupta)**	14-30 September, 2020
13	TPC member of 2nd International Conference on Machine Learning, Image Processing, Network Security and Data sciences (MIND-2020) at NIT Silchar, India **(Dr. Nidhi Gupta)**	30-31 July, 2020
14	Associate Editor, International Journal of Sensor Networks, Inderscience, SCI Indexed **(Dr. Nitin Gupta)**	September 2020 to till date
15	TPC member of International Workshop on Open Road to Next Generation Mobile Networks, IEEE GLOBECOM Taipei, Taiwan **(Dr. Nitin Gupta)**	7-11 December 2020
16	TPC member of 16th International Conference on Mobility, Sensing and Networking (IEEE MSN 2020) in Tokyo, Japan **(Dr. Nitin Gupta)**	17-19 December 2020
17	Member of the Executive Committee of the IEEE Communication Society- Delhi Chapter. **(Dr. Nitin Gupta)**	5 June, 2019 to till date
18	Expert Lecture at University of Milwaukee **(Dr. Venu Shree)**	18 June, 2019
19	Nominated as member of Board of Studies of Central University Himachal Pradesh **(Dr. Vimal Sharma)**	Sept. 2020 to Sept. 2023
20	Invited Exper Talk in STC (TACE—2019) on Molecular Simulations in Chemical Engineering at BIET Jhansi, India by **(Dr. A.K. Gautam)**	27-31 July, 2019
21.	Invited Talk under TEQIP-III on Application of Modeling and Simulation Techniques in Mechanical Engineering at BU Jhansi, India **(Dr. A.K. Gautam)**	15/11/2019

Significant outreach Institute out Activities

S. No.	Name of Activity	Duration of Activity
22.	Planery Lecture delivered on "VLSI Signal Processing- From a Designer's Perspective" in 1st International Conference on Communication, Computing and Signal Processing (CCSP-2020) NIT Jalandhar. **(Prof. Rajeevan Chandel)**	23-24 July, 2020
23.	Expert Invited Lecture on "Recent Trends & Challenges in VLSI Design Techniques" in Webinar, organized by Poornima College of Engineering, RTU, Rajasthan. **(Prof. Rajeevan Chandel)**	8 June, 2020
24	Invited Talk in One-week short term course (STC) on "Advanced Trends in Manufacturing & Material Characterization". **(Dr. Raj Bahadur Singh)**	24-28 February, 2020
25.	Invited talk, in One week short term course on "Emerging Materials: Properties, Applications and Characterizations **(Dr. Nitesh Kumar)**	27-31 August, 2020
26	Research Methodology and Design of Experiments, 4th International Conference on "Advances in Power Generation from Renewable Energy Sources (APGRES-2020)". GEC Banswara (Rajasthan) in association with BVM, Vidyanagar (Gujarat) **(Dr. Akhilesh Kumar Choudhary)**	6-7 March, 2020
27	Advancement in Engine combustion and alternative fuels, FDP-Advances in Engine Combustion and Emission Diagnostics, NIT Andhra Pradesh. **(Dr. Akhilesh Kumar Choudhary)**	9 October 2020
28	Advancement in Engine Research, Institute of Engineering and Technology, Bundelkhand University, Jhansi. **(Dr. Akhilesh Kumar Choudhary)**	21 May, 2020
29	Design of Experiments in solar energy research, in Gujcost Sponsored Webinar on Solar Energy Applications in Present Era". **(Dr. Akhilesh Kumar Choudhary)**	16 October, 2020
30	Importance of Design of Experiments in Engineering Research, Webinar at G.H. Raisoni College of Engineering, Nagpur". **(Dr. Akhilesh Kumar Choudhary)**	20 May, 2020
31	Expert Talk in e-Workshop on Modelling and Simulation in Thermal Engineering, organized by NIT Hamirpur **(Dr. Deepak Sharma)**	30 October – 3 November, 2020
32	Expert Talk Delivered in STC on "Micro scale devices" held at the Department of Electronics & Communication Engineering, NIT Jalandhar.**(Dr. Gargi Khanna)**	23 August 2020
33	Expert Talk Delivered in STC on "Low Power VLSI Design" held at the Department of Electronics & Communication Engineering, NIT Jalandhar. **(Dr. Gargi Khanna)**	16 September 2020
34	Expert Talk Delivered in STC on "MEMS Based Piezoelectric Energy Harvesting" held at the Department of Physics, NIT Jalandhar. **(Dr. Gargi Khanna)**	24 September 2020
35	Expert Talk Delivered in STC on "MEMs devices for biomedical applications" held at the Department of Instrumentation & Control Engineering, NIT Jalandhar. **(Dr. Gargi Khanna)**	16 October 2020

Other Institute Activities

Institute Sports Meet

Technical Festival- Nimbus

Other Institute Activities

Training & Placement Conclave

International Yoga Day

Independance Day celebration

Tenth Convocation

Republic Day

Cleanliness Event under Swachch Bharat Abhiyan

Disclaimer

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