



## MESSAGE FROM THE DIRECTOR

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

It is my pleasure to introduce to you all yet another issue of institute newsletter. National Institute of Technology, Hamirpur is one of the premier NITs in the country and is known for imparting Quality Technical Education and for the beauty of the lush green pine trees and has been adjusted as best green campus of the country in recent past. Institute is committed to take up research in frontier areas of technology, and to create new knowledge. Our main focus has been quality and to foster the culture of innovation, creativity and entrepreneur initiatives amongst the students.



Congratulations to Dr Bharat Bhushan, TPO of the institute for setting up new standard for placement of students wherein Mr. Nishant Hada received a package of 1.51 Crores per year. Also, Mr Prateek Bharat Sharma and Miss Sabhya Sood two other students got package of 1.12 Crores and 1.06 Crores per annum respectively. Though students have not joined the institute, still more than 58% students have been placed so far with more than 70 students getting a package of more than 16 lacs per annum.

The first and foremost job at hand is to implement New Education Policy 2020. NEP 2020 has been partially implemented as institute has allowed Multiple-Entry and Multiple-Exit from the various programmes being offered as on date. Next is to revamp the curriculum and align it with other institutions of higher learning such as IITs, IIMs, NITs and Central Universities. Also, provision has to be made for holistic and multidisciplinary education and allowing flexibility with reduction in total credits to be earned. The exercise is on and we have identified courses which are Discipline specific Cores, Institute Cores, Electives and open courses to be taken from a pool of courses available online or offline including SWAYAM courses and MOOCS. The exercise is in its final stage and soon institute will have a curriculum that has capability to nurture students holistically with availability of courses from fine arts, science, commerce etc.

Next institute is taking all necessary steps for having accreditation of programmes where the period of accreditation is already over. For this purpose and with so much changes in Higher Education landscape (NEP-2020), institute is revising its "Strategic plan" by consulting all stakeholders. The strategic plan of the institute is in final stage and will be circulated to alumni and distinguished scholars for their valuable inputs. The SAR report for various departments is being uploaded. For the first time at NIT Hamirpur Internal Quality Assurance Cell "IQAC" has been established and the institute is in process of conducting internal audit of various departments and sections. The cell will be overall responsible for internal quality checks. In NIRF 2021, NIT Hamirpur is ranked among top 100 institutions in the country and with dedicated efforts of the faculty institute will definitely improve its ranking nationally and internationally also.

During pandemic time, all faculty members have contributed for online teaching and evaluation of the courses and students learning has been carried out to a greater extent. The publication data of the faculty has shown a growth in the number and quality of papers published. To increase IRG, self-sponsored seats in M.Tech programmes has been added. Keeping in view health of students, the functioning of student activity centre (SAC) started recently with the professional level badminton, tennis and basketball court. Also, to combat COVID-19, regular yoga classes are being conducted for students, staff and their families. Institute has signed Memoranda of Understanding (MOUs) with many industries and academic institutions. I have planned a few activities with Dean (RC) and Dean (SW) to enhance interaction with Alumni and leverage the full potential of our Alumni to contribute for boosting perception of the institute.

At the end, I would like to thank all stakeholders of the institute for their wholehearted support and contribution in improving the standards of education and research at this prestigious institute of national importance. The focus of our institute has to be all round value-based multidisciplinary holistic education that benefits society at large and results in better ties with industry, academia and International community.

I wish you all a very good future and wish that the flag of NIT Hamirpur always flies high.

Jai Hind! Jai Bharat!

(Prof Lalit Kumar Awasthi)

## Inside This Issue

R&D Projects Patents Filed Ph.D. Completed Journal Papers Conference Papers National / International Conference Workshops & STC conducted Books Published Awards Book Chapter Published Outreach Activities Placements

## Activities related to COVID-19

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

### 1. Demonstration of an Innovative Motorised Trolley for transporting two oxygen Cylinders

Demonstration of a Innovative Motorised Trolley for transporting two oxygen Cylinders within Hospitals of Covid Centres at Govt. Hospital Tauni Devi District Hamirpur in Presence of DC Hamirpur and Hospital Officials as an attempt by NIT Hamirpur for Society welfare during Covid 19 Pandemic Era in July 2021.

An Electrical Engineering Alumni Mr. Rajat Anant (17267) has been able to develop it under guidance of Faculty Mentors Dr. R. K. Jarial, Dr. Rajesh Kumar Sharma and Dr. P. K. Sood, NIT Hamirpur on receiving special grant from DC Hamirpur. The product has been well appreciated by Team of Medical Doctors and Staff on Covid Centre care Duty as an extraordinary support system to handle bulk supply of Oxygen Cylinders in various Floors/ Wards of Govt. Hospitals in Himachal Pradesh located Covid Centre Buildings /Premises of ICU for faster service under emergency situations.







## External sponsored Research and Development Projects sanctioned

S. No.	Title of R&D Project/ Patent	Name of Funding Agency	Heading Status [PI / Co-PI(.)]	Present Status of Project
1.	Power Flow Management in Solar-Wind-Based Micro-Grid Using Artificial Intelligent-Based Control Techniques	HIMCOSTE, Shimla	Dr. Anil Kumar Yadav (PI), Dr. Rajan Kumar (Co-PI)	Ongoing
2.	Post Project Evaluation (End Line Evaluation) District (Hamirpur, Kangra)	WDC-PMKSY (erstwhile IWMP)	Dr Manoj Sharma/ Prof. Piar Chand	Completed
3.	Prospects and Problems of Tribal Entrepreneurship		Dr Manoj Sharma/ Prof. Piar Chand	Completed

## Consultancy Projects sanctioned

S. No.	Name of Department	Amount (in Rs.)	No. of Agencies
1.	Department of Civil Engineering	1,35,80,567.00	147
2.	Department of Electrical Engineering	7,86,603.00	06
3.	Department of Electronics & communication Engineering	10,76,466.00	01
<b>Total</b>		<b>1,54,43,636</b>	<b>154</b>

## Patents Filed

S. No.	Title	Patent Application Number	Inventor / Author
1.	Quizzie – A smart quiz making platform	SW-14782/2021	Prof. L.K. Awasthi
2.	Software for simulating MIPS behavior	SW-14806/2021	Prof. L.K. Awasthi
3.	Motorized Trolley for carrying oxygen cylinders in Hospitals/ Covid centres”	2021111034843	Mr Rajat (17267) Dr. R. K. Jarial, Dr. Rajesh K Sharma, Dr. P. K. Sood.
4.	A System and a Method for Performing Secure Transaction in ATM	2021103044	Pawan Singh; Prateek Singhal; Baseem Khan; S. Rajkumar; L. Devi; S. Kanchana; Om Prakash Mahela; and Ram Niwash Mahia
5.	An autonomous secure method to control counterfeiting in the Aviation Supply Chain using Blockchain Technology	(India): 202111027192 (Australia): 2021105790	Arif, M.; Adil, M. & Ullah, A.
6.	A system for identifying indicators of sustainable smart-agriculture driven by big data using modified-TISM	(India): 202111031100 (Australia): 2021105805	Adil, M.; Dogra, N. & Ullah, A.
7.	A System for Assessing Service Delivery of Self-Service Teller Machine	(Australia): 2021107108	Adil, M.

## MOU(s) signed with National and International organizations



## Ph.D. Completed

S. No.	Title of Thesis	Supervisor / Co-Supervisor	Ph.D. Thesis Status
1.	An Extensive Study on Intelligent Control of Renewable Energy System		Awarded
2.	Grid Synchronization Techniques for Smart PV Inverters	Dr. Raj Kumar Jarial / Dr. Chandrasekaran S.	Awarded
3.	Emotional Intelligence, Servant Leadership and Job Satisfaction as Determinants of academic Achievement	Prof. Piar Chand	Completed
4.	Applications of fixed-point theory in existence of solutions of fractional boundary value problem	Dr. Ramesh Kumar Vats	Awarded
5.	Performance of Multi Edges Footing with Structural Skirts Resting on Sand	R K Dutta	Awarded
6.	"Titanium-indole complexes and their biological applications	Dr. Raj Kaushal	Completed
7.	Inhibition of Aggregation and Post-translational Modification of Human $\gamma$ D-crystallin: Implications in Cataract Prevention	Dr. K. S. Ghosh	Completed
8.	Jarnail Singh; Synthesis and structural, optical, electrical properties of transparent conducting oxides: Mg, Al and Ni substitutes Cr <sub>2</sub> O <sub>3</sub> thin films	Prof. Ravi Kumar	Completed

**Journal Papers**

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- Neha Sharma and Rajeevan Chandel, "Variation Tolerant and Stable Low Power FGMOS based SRAM Cell Design," International Journal of Modeling, Simulation, and Scientific Computing, <https://doi.org/10.1142/S179396232150029X>, vol. 12, no. 04, 2150029, 2021.
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## Journal Papers

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## Journal Papers

- Sunil Jadav, Rajeevan Chandel, MunishVashishath, "Modeling the Impact of Fundamental and Quantum Resistance on the Performance of SWCNT Based RLC Interconnects," International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, Wiley, 33: e2698. <https://doi.org/10.1002/jnm.2698>. [SCI, Impact factor:1.296].
- Sunil Jadav, Shubham Tayal, Rajeevan Chandel, Munish Vashishath, "High speed RLC equivalent RC delay model using normalized asymptotic function for global VLSI interconnects," Microelectronics Journal, Elsevier, <https://doi.org/10.1016/j.mejo.2020.104941>, vol. 107, pp. 104941, 2021. [SCIE, Scopus].
- Richa, T.P. Sharma, Ajay Sharma, "Detect and Prevent Misbehaving Intruders in Internet of Vehicles," International Journal of Cloud Applications and Computing (IJCAC) (Accepted)
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- Pankaj Bhardwaj, Jarnail Singh, Rajesh Kumar, Ravi Kumar, Vikram Verma "Structural, optical and magnetic characterization of Ni<sup>2+</sup> ions doped chromium oxide (Cr<sub>2</sub>O<sub>3</sub>) nanoparticles" *Solid State Sciences* 115, 106581 (2021).

## Text / Reference Book Published

S. No.	Title of the book with ISBN	Name (s) of the Author (s)	Year of Publication	Publisher
1.	Nanoscale VLSI - Devices, Circuits and Applications, copyright 2021. In series Energy Systems in Electrical Engineering, Series Editor, Prof. Muhammad H. Rashid, Florida Polytechnic University, Lakeland, USA.	Dr. Rohit Dhiman & Prof. Rajeevan Chandel, (Authors cum Editors)	2021	Springer, Singapore
2.	Recent Trends in Management and Social Sciences ISBN- 97893-90818-556	Prof. Piar Chand, Dr. Richa, Dr. Kumar, Dr. Dhiman	2021	Bharati Publication
3.	"Organizational and Psychological Factors in the Development of Work Stress"	Prof. Piar Chand	Under press, 2021	
4.	Behavioral Science and Management	Prof. Piar Chand	Under press, 2021	
5.	Rejuvenating Urban Water Bodies: Design and perspective of daylighting	Puneet Sharma, Akhila N Menon	22, June, 2021	Lambert Academic Publishing
6.	Chemical Nanofluids in Enhanced Oil Recovery: Fundamentals and Applications, 1st Edition	Rahul Saha, Pankaj Tiwari & ramgopal VS Uppaluri	2021	CRC Press, Taylor & Francis



## Conference Papers

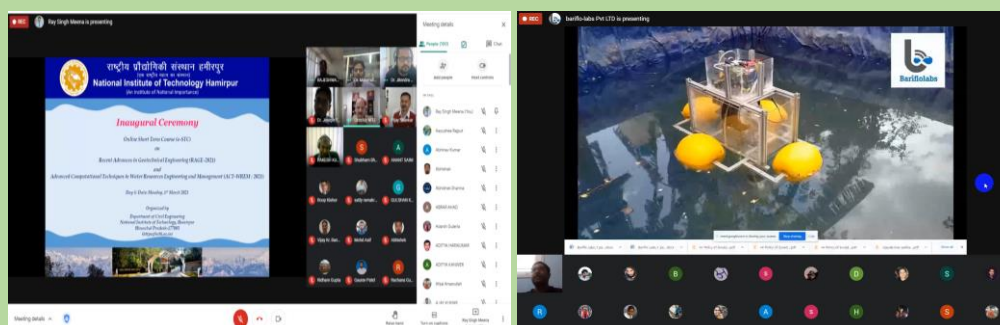
S. No.	Title	Conference Status	Publication Year	Authorship
				[Author / Co-Author]
1.	Understanding guests' behavior for green hotels: The moderating role of Involvement	Scopus	2021	Shampy Kamboj
2.	Role of Travel Constrains and Personality Traits in Shaping Travel Intention: Traveler with Toddler Perspective	SCI	2021	Shampy Kamboj
3.	Enhancing Student Engagement: The Role of Orientation Events Experience in Higher Education	SCI	2021	Shampy Kamboj
4.	Learned helplessness among people with disabilities in the tourism context: An empirical study	Scopus	2021	Shampy Kamboj
5.	"Post-Crash Detection and Traffic Analysis," 8th IEEE International Conference on Signal Processing and Integrated Networks (SPIN-2021), DoE&CE, ASET, Amity University, Noida, Delhi-NCR, India.	IEEE Conference	26-27 August 2021.	Nivali Yadav, Umesh Thakur, Akanksha Poonia, Rajeevan Chandel
6.	"Energy Efficient SRAM Design Using FinFETs and Potential Alteration Topology Schemes," 10th International Symposium on Embedded Computing and System Design (ISED-2021), DA-IICT, Gandhinagar, Gujarat.		16th -18th July 2021.	Samarth Agarwal, Prof. Rajeevan Chandel
7.	"A Comparative Study of Gallium Nitride Field Effect Transistors with Conventional Silicon Devices," International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021), DR B R Ambedkar NIT, Jalandhar.		25-27 June, 2021	Samarth Agarwal, Prof. Rajeevan Chandel
8.	"Design and Simulation of Low Noise Amplifier using Active Inductor for 100nm CMOS Technology," International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021), Dr. B R Ambedkar NIT, Jalandhar.		25-27 June, 2021	Sonalika Singh, Prof. Rajeevan Chandel
9.	"Design and Comparative Analysis of a Single Stage Differential Amplifier using FinFETs and MOSFETs," International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021), Dr. B R Ambedkar NIT, Jalandhar.		25-27 June, 2021	Afreen Haider and Prof. Rajeevan Chandel
10.	"Machine Learning Usage for Decision Making in Automobile Sector," International Conference on Recent Development on Materials, Reliability, Safety and Environmental Issues (IMRSE-2021), Dr. B R Ambedkar NIT, Jalandhar.		25-27 June, 2021	RazdaBisen, Prof. Rajeevan Chandel,
11.	Analytical investigation of photovoltaic thermal system under external recycle: A Comparative Study	SCOPUS	Aug-21	Co-authr Prashant Dhiman
12.	An Assessment of Performance and Emission Characteristics of Diesel Engine Fueled with Zirconia Nanoparticles Additive in Diesel Biodiesel Blend, Available at SSRN 3825784, Elsevier, 2021	Scopus	April,2021	Pawan Kumar Singotia, Akhilesh Kumar Choudhary, Shashikant Verma, Veeresh Fuskele
13.	Hydrogen and Microalgae Biodiesel Fuel in IC Engine: A State of Art, IEEE International Conference on Simulation, Automation & Smart Manufacturing (SASM 2021) 20-21 Aug 2021 GLA University Mathura	Scopus	Aug,2021	Niketan and Akhilesh Kumar Choudhary,
14.	Condition Monitoring of Mechanical Systems: A state of the Art, IEEE International Conference on Simulation, Automation & Smart Manufacturing (SASM 2021) 20-21 Aug 2021 GLA University Mathura	Scopus	Aug,2021	Vijay Kumar and Akhilesh Kumar Choudhary,

## Conference Papers

15.	Big Data Storage and Decentralization: A Review." In 2021 2nd International Conference on Secure Cyber Computing and Communications (ICSCCC), pp. 546-550. IEEE, 2021.	Scopus	2021	Sharma, Punit, and Lalit K. Awasthi. "
16.	"Towards Framework for Edge Computing Assisted Covid-19 Detection using CT-scan Images", in IEEE ICC, Montreal, Canada, June 2021.	Scopus	2021	Varan S. Rohila, Nitin Gupta, Amit Kaul and Uttam Ghosh,
17.	"Divergent applications of Blockchain Security: A Survey." In 2021 2nd International Conference on Secure Cyber Computing and Communications (ICSCCC), pp. 212-217. IEEE, 2021.	Scopus		Sharma, Vakul, and Lalit Kumar Awasthi.
18.	Reclaiming and Rejuvenating Urban Water Bodies: Case of Mullassery Canal, Kochi, Kerala	Scopus	April, 2021	Akhila N Menon, Puneet Sharma
19.	Microstructural analysis of forged Al-11Si-2.5Cu-0.6Fe alloy at different processing conditions	Scopus	25-May-21	Khemraj Sahu, Dhiraj Narayane, Manvandra Kumar Singh, Raj Bahadur Singh, Ashish Srivastava
20.	Thermodynamic Analysis on the Computationally Designed Single-Walled Carbon Nanotubes	Web of science	Jun-21	Main Author
21.	A theoretical and mathematical study on the importance of petroleum derivatives in the production of sanitizer-based products	Web of science	Sep-21	Main Author
22.	Comparative study of two identical industrial pulping digesters for their performance using radiotracer rtd measurement	Web of science	Sep-21	Co-Author
23.	Enzyme-assisted turmeric oil extraction from turmeric rhizomes	Web of science	Sep-21	Co-Author

## Short Term Courses conducted

Online short-term course on "Advanced Computational Techniques in Water Resources Engineering and Management (ACT-WREM-2021) organized by Civil Engineering Department from 1 to 5 March 2021. The program was open to practitioners and researchers from industry/academia, faculty members, UG/PG/Doctoral students from academic institutions universities/government and private colleges. In this e-STC, a total 66 participants were enrolled from various institutions like NITs, IITs, and Central Universities and private engineering colleges of various parts of India. Subject experts from various institutes and universities of national importance shared their knowledge and experience with the participants in a highly interactive manner during this e-STC. The program was highly interactive and collaborative among the participants. All the lectures were very informative and full with knowledge. In this course, the participants were educated with most advanced technologies in the field of Water Resources Engineering. The course is benefited to the participants who are at the beginning of their research career and those who are at their middle level of research. This course highly motivated and inspired the participants to work in the advanced field of Water Resources Engineering.



## National / International Conference organized

International conference on Urban resilience- Building Resilient Urban Communities in Transforming Cities. Sept.22-24, 2021. Recognizing ongoing processes of rapid urban transformation in many cities in developing countries, experts from different fields of academics, NGOs, government, private practitioners will come together to share their work experience and thoughts on work they have been doing in the field of climate change and resilience, also will be sharing ideas on how this can be embedded in the professional education system. NGO partners will be showcasing their experience on working with urban poor communities in the areas of Water & Sanitation, Climate Change, Energy Justice, Housing. The higher academic institutions have a major role to play in transforming theory to practice through young professions. Related consequences due to unprecedented rural urban migration in many parts of Asia are changing the faces and characters of cities. Due to increasing demands on infrastructures and urban services, cities in developing countries are often pushed at the edge of collapse already during normal, non-disaster times. While such cities try to implement needed measures to safeguard the well-being of their citizens, looming impacts of climate change in the form of more frequent and intense natural hazards pose new and additional challenges to their urban communities. BReUCom (Building Resilience Urban Communities), a capacity-building project in Higher Education, intends to address the issue of Resilience and Climate Change by means of discussions and presentations around thematic areas like Traditional Culture and Wisdom in Resilience, use of Technology and Planning, Informality at the center of resilience.



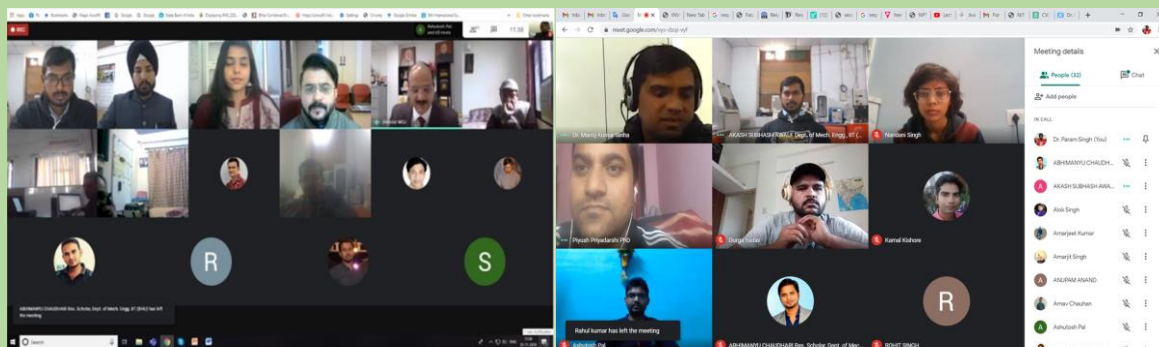
## Awards

S. No.	Name of Faculty	Name of Organisation	Date	Award
1.	Dr. Shampy Kamboj	Association of Turkish Tourism Academics (TUADER)	April 2021	Outstanding participation and invaluable contribution
2.	Prof. Rajeevan Chandel	NIT Hamirpur HP	15-30 Sep, 2021	First prize in Hindi Poem recitation Hindi Pakhwada (Abhyuday-2021)
3.	Arvind K. Gautam	NIT Jalandhar, Punjab, India	September 16-19, 2021	Best Paper Award in International Chemical Engineering Conference 202, Chemical Engineering Department, NIT Jalandhar



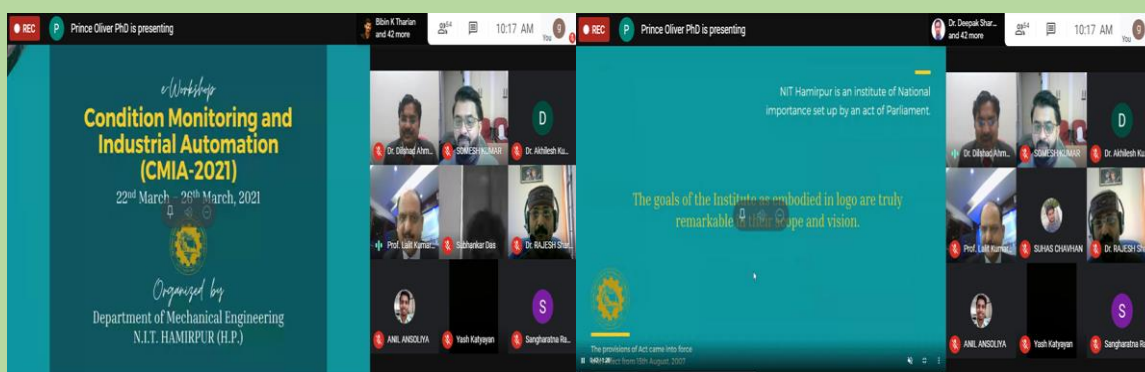
## Workshops / Webinars conducted

The department of Mechanical Engineering, NIT Hamirpur had organized an e-workshop on Advances in Manufacturing: Materials, Processes & Systems (AMMPS-2020) during Nov. 23-27, 2020. In this e-workshop, there was ten lecture sessions, each of two hours taken by the eminent speakers of various reputed institutes like IITs/NITs and industry. The e-workshop was inaugurated by Hon'ble director, NIT Hamirpur Prof. Lalit Kumar Awasthi in the chairmanship of Head DoME, Dr. Somesh Sharma on Nov. 23rd 2020. A total of 63 participants had joined this e-workshop.



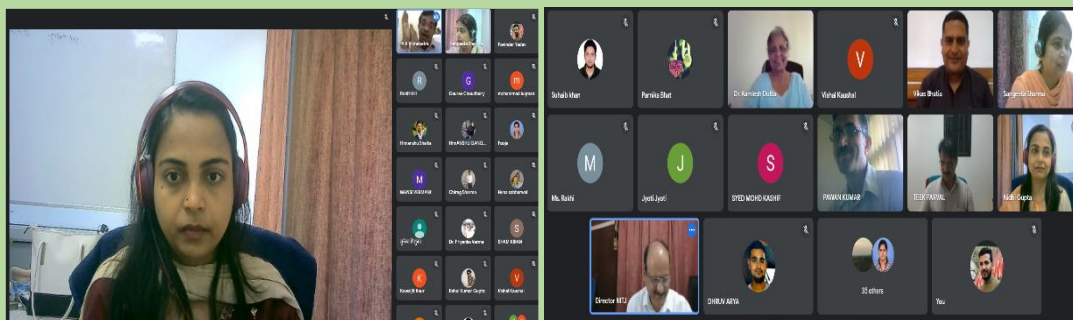
An ATAL (FDP) on " Computational Methods in Chemical Engineering (CMCE - 2021) in virtual mode was conducted by Dr Pooja Thakur and Dr Rahul Saha in the Department of Chemical Engineering from 6-10th September 2021. The program had 14 experts talk which includes one talk on relief and revive and remaining 13 talks on advanced experimental and computing schemes in the field of chemical engineering. The resource persons were invited from reputed institute like IITs and NIT. This event was designed to provide platform to the faculty members, research scholar, industrialist to gain, exchange and share their ideas towards research filed including chemical engineering and interdisciplinary branch, such that an effective contribution can be made towards the betterment of our country.

e- Workshop on Condition Monitoring and Industrial Automation (CMIA-2021) 22nd -26th March 2021. The Department of Mechanical Engineering has organised a 5days e- Workshop on the topic of Condition Monitoring and Industrial Automation (CMIA-2021) from 22nd March 2021 to 26th March 2021. The total 71 participants have been participated in this e- workshop from various part of the country as well as from abroad such as South Africa, Russia, Germany etc. The e-workshop was conducted in fifteen sessions keeping three sessions of two hours each per day.



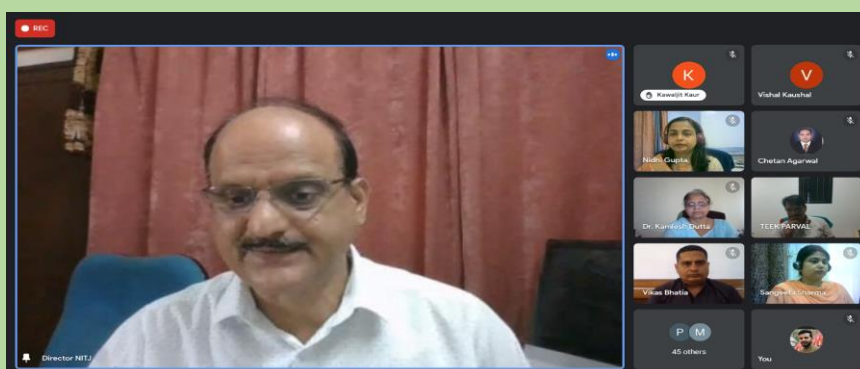
## Workshops / Webinars conducted

The e-Workshop on Recent Advancements in AI & IOT (RAAI-2021) started on September 25-29, 2021 at 10:00AM through Google meet. The workshop was jointly conducted by the department of Computer Science & Engineering and Mathematics & Scientific Computing. In the inaugural function honourable Director Prof. (Dr.) Lalit Kumar Awasthi, as a Chief Guest, Mr. Vikas Bhatia DRDO from IIT Roorkee, Alumunus of NIT Hamirpur as Guest of Honor, Dr. Pawan Kumar Sharma as Head of the Department of Mathematics and Scientific Computing, Dr. TP Sharma, Head of the Department of Computer Science and Engineering Prof. YD Sharma Convener, Dr. Kamlesh Dutta as Convener, Registrar Dr. Yogesh Gupta, Dean Academics Prof. Rakesh Kumar Dutta, Dr. Sangeeta Sharma and Dr. Nidhi Gupta as Coordinators, were present along with participants from all over India and audience from another department of NIT Hamirpur. The sessions were taken by experts in the field of Artificial Intelligence and IoT along with demonstrative lectures. Five days e-workshop was quite informative and beneficial for the researchers and enthusiastic learners in the field. The event was conducted aimed to explore advanced Artificial Intelligence smart technologies. It was a successful event and well appreciated by participants.



e-Workshop on “Recent Advancements in Artificial Intelligence and Internet of Things” (RAAI-2021) September 25-29, 2021 Jointly Organized by Department of Computer Science & Engineering and Mathematics & Scientific Computing National Institute of Technology, Hamirpur. Department of Computer Science & Engineering and Mathematics & Scientific Computing during September 25 to 29, 2021, jointly organized a Five days e-Workshop on “Recent Advancements in Artificial Intelligence and Internet of Things” (RAAI-2021). In the inaugural function honourable Director Prof. Lalit Kumar Awasthi, as a Chief Guest, Mr. Vikas Bhatia, Scientist DRDO (Alumine of NIT Hamirpur) as Guest of Honor, Dr. TP Sharma Head of the Department CSE, Dr. Pawan Kumar Sharma Head of the Department MSC, Prof. YD Sharma and Dr. Kamlesh Dutta as Conveners, Dr. Sangeeta Sharma and Dr. Nidhi Gupta as Coordinators were present along with participants from all over India and audience from other department of NIT Hamirpur. The sessions were taken by experts in the field of Artificial Intelligence and IoT along with demonstrative lectures.

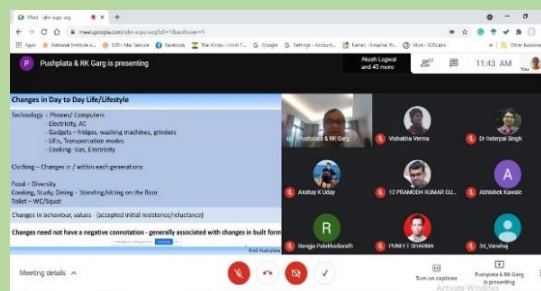
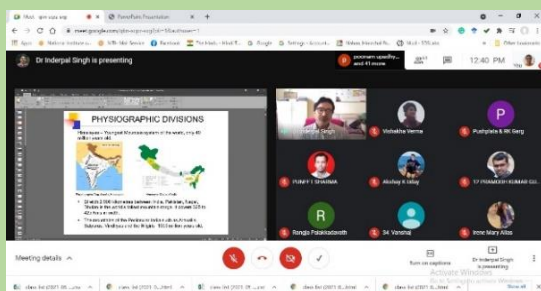
Five days workshop was quite informative and beneficial for the researchers and enthusiastic learners in the field of AI and IoT. The event was conducted aimed to understand the concepts of AI and IoT applications along with some additional topics like cloud computing, Deep learning etc. It was a successful event and appreciated by participants.



## Workshops / Webinars conducted

e-Workshop on Understanding Change in Built Form with Focus on Hill Regions, 14th May 2021 – 18th June 2021. The course was organized to disseminate the knowledge related to sustainable planning and designing of built environment in context to hill regions. Understanding forces that are affecting our built form with changing societies. Different experts contributed at different levels in delivering the following topics to the participants.

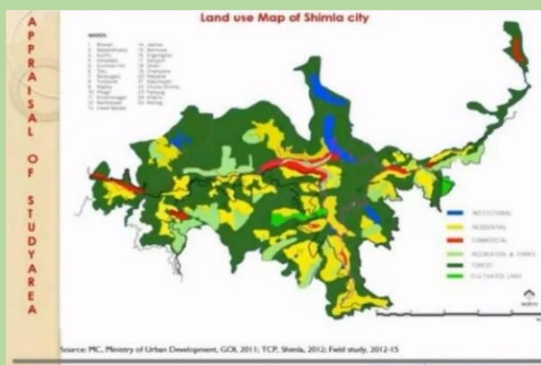
- Understanding change in the built forms
- Energy efficiency in Residential buildings of hill towns
- Transportation in hill areas with special focus on Shimla
- Changing built forms in hilly regions through structural deficiencies and material changes
- Future of tourist mobility in hill city of Shimla and its impact on built form
- Changes in the land use of Dehradun and its impact on built form
- Study of Energy consumption with changing built-form
- Sustainable urban water management in hill towns
- Hills as Commons-Case of Nilgiris and its Tribes
- Spatial Planning in hill areas
- Working with Raster data and Terrain Analysis using QGIS
- Future of sustainability in hill towns



e\_workshop on Sustainable Built-Environment in Hills (SBH-2021) was conducted by Department of Architecture from September 11 - 15, 2021. The main objectives of the e\_workshop was:

- To bring together leading academicians, industrialists, and researchers to exchange and share their experience and knowledge related to Sustainable Built-Environment.
- To provide a platform to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered, and solutions adopted in the field.
- To share the acquired skills and challenges encounter for developing climatic responsive designs.
- To disseminate the architectural design and structure considerations in buildings.

Main topics that were discussed during the e\_workshop was Landscape a tool for sustainable development, Sustainable Urban Water management in hill towns, Role of Sustainable Architecture in risk reduction, Multimodal Transport in hill areas, Water Resources Planning and Management for Sustainable Development, Structural safety in hill towns, Durability and Service Life of RCC Structures in Hilly Areas, Evaluation methods for resilience, Role of GIS in vulnerability assessment.







### 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.	SM- and FL-based MRALFC schemes for solar-wind based Micro-Grid	Pawan Kumar Pathak, Anil Kumar Yadav	Control of Standalone Microgrid	Anuradha Tomar, Prerna Gaur, Ritu Kandari, Neeraj Gupta	2021	Academic Press, Elsevier
2.	"Power Management in Electric Vehicles Using a Hybrid Energy Storage System"	Vishwajeet Kumar Sinha; Ram Niwash Mahia; and Om Prakash Mahela	" Active Electrical Distribution Network: Issues, Solution Techniques and Applications "	Sanjeevikumar Padmanaban, Baseem Khan, Om Prakash Mahela, Hassan Haes Alhelou and S. Rajkumar	2021 (Accepted for Publication)	Elsevier
3.	"Modified Space Vector Pulse Width Modulation Technique for Speed Control of Permanent Magnet Synchronous Motor in Electric Vehicles"	Ashish Kumar Sinha; Ram Niwash Mahia; and Om Prakash Mahela	" Active Electrical Distribution Network: Issues, Solution Techniques and Applications "	Sanjeevikumar Padmanaban, Baseem Khan, Om Prakash Mahela, Hassan Haes Alhelou and S. Rajkumar	2021 (Accepted for Publication)	Elsevier
4.	Big Data in COVID-19 Assistance- Concepts, Motivations, Advances and Applications in Real-World.	Sukirti Tiwari & Ashwani Kumar Chandel.	Artificial Intelligence for COVID-19. Studies in Systems, Decision and control.	Oliva D., Hassan S.A., Mohamed A.	2021	Springer
5.	Identifying Indicators of Sustainable Smart Agriculture Driven by Big Data Using Modified Total Interpretive Structural Modeling (mTISM)	Nikhil Dogra & Mohd. Adil	Innovations in Cyber Physical Systems	Singh J., Kumar S., Choudhury U.	2021 (Sep)	Springer, Singapore
6.	Determinants of RFID Adoption Intention in the Healthcare Industry for Patient Monitoring: A Special Reference to COVID-19	B Sarmah, Shampy Kamboj, N.K. Phookan	Handbook of Research on Emerging Business Models and the New World Economic Order	José Manuel Saiz-Álvarez	2021	IGI Global
7.	"Fixed-Point Divider Using Newton Raphson Division Algorithm," in Proc. of the Fifth International Conference on Microelectronics, Computing and Communication Systems (MCCS-20), Ranchi, India and in Springer, Singapore.	Pawan Kumar Pandey, Dilip Singh, & Rajeevan Chandel,	Lecture Notes in Electrical Engineering (LNEE), Springer, Singapore ISBN 978-981-16-0275-7,		2021	Springer, Singapore

## Book Chapter Published

8.	Optimization of Process Parameters in Drilling of Carbon Fiber Reinforced Vinylester Composite Having Varying Fiber Orientations Using Taguchi Methodology	Neeraj Kumar, Rahul Kumar Prajapati, Rajesh Kumar Sharma, Santram Chauhan,	Optimization Methods in Engineering. Lecture Notes on Multidisciplinary Industrial Engineering	Mohit Tyagi, Anish Sachdeva, Vishal Sharma	2021 (First online June 2020)	Springer
9.	Masking the Emotions at workplace : A Review on the consequences of Emotional Labour	Piar Chand ryhal, Swarali N. sahasrabudhe	Recent Trends in Management And Social Sciences ISBN- 97893-90818-556	Dr. Sachin, Dr. Neeraj Dhiman, Dr. Richa Joshi	2021	Bharti publication, new Delhi
10.	An Adaptive Smart Health-Care System to detect Tumor from Brain MRI using Machine Learning Algorithm	Nidhi Gupta	Brain Tumor MRI Using DL Techniques	Jyotismita Chaki	2021	Elsevier
11.	Distributed denial-of-service attacks and mitigation in wireless sensor networks	Singh, Rohit, Lalit Kumar Awasthi, and K. P. Sharma	Distributed Denial of Service Attacks: Concepts, Mathematical and Cryptographic Solutions	Rajeev Singh, Mangey Ram	2021	De Gruyter
12.	Data Caching at Fog Nodes Under IoT Networks: Review of Machine Learning Approaches	Riya, Nitin Gupta, Qin Xin	Deep Learning for IoT Infrastructure, CRC Press, USA.,	Uttam Ghosh, Al Sakib Khan Pthan	2021	CRC Press
13.	Neural network-based prediction of cone side resistance for cohesive soils	T Gnananandara o, RK Dutta, VN Khatri	Lecture Notes in Civil Engineering	Patel S., Solanki C.H., Reddy K.R., Shukla S.K.	2021	Springer
14.	Mechanical behaviour of bentonite-cement mixtures subjected to change in moisture content	RK Dutta, JS Yadav, AK Shukla	Lecture Notes in Civil Engineering	Garg A., Solanki C.H., Bogireddy C., Liu J.	2021	Springer
15.	Tsunamigenic seismic activity (earthquakes) prediction from III-component seismic data	Tammineni Gnananandara o, Rakesh Kumar Dutta, Vishwas Nandkishor Khatri	Seismic Hazards and Risk	T. G. Sitharam, Sreevalsa Kolathayar, Mukat Lal Sharma	2021	Springer
16.	Carbon Footprint Estimation for Academic Building in India	Venu Shree, Himanshu Nautiyal, Varun	LCA Based Carbon Footprint Assessment	Subramanian Senthilkannan Muthu	2021	Springer, Singapore
17.	Optimum Formulation of Chemical Slug and Core Flooding Studies	Rahul Saha, Ranjan Phukan, Lalit Pandey, Pankaj Tiwari	Microbial Enhanced Oil Recovery: Principles and Potential	Lalit Pandey, Pankaj Tiwari	2021	Springer
18.	CO <sub>2</sub> -Based Enhanced Oil Recovery,	Ranjan Phukan, Rahul Saha, Lalit Pandey, Pankaj Tiwari	Microbial Enhanced Oil Recovery: Principles and Potential	Lalit Pandey, Pankaj Tiwari	2021	Springer

## Significant Outreach Activities

S.	Name of Activity	Duration of Activity
1.	Start-up Incubation enrolment under mentor ship of Dr R K Jarial for an incubatee Mr Rajat Anant was sanctioned under CM Himachal Pradesh start-up innovation scheme for year 2021-22.	2021-22
2.	Representing India in Annual International Electro-Technical Committee (IEC) sessions. Dr R K Jarial attended National Technical Working Group ETD-02 meeting with National Experts nominated by Bureau of Indian standards (BIS), Manak Bhawan, New Delhi for representing India in Annual International Electro-Technical Committee (IEC) sessions for Technical Committees on Solid Insulations for High Voltage System via on line mode in Sept. 2021.	Sept. 2021
3.	Under TIFAC CORE NITH, one consultancy task assignment which was awarded by HPSEBL, Shimla in Feb 2021 on Evaluation and Quality Inspection of Low Voltage Sites under System Improvement Scheme in respect of 150 field substations under jurisdiction of HP State Electricity Board Ltd. Shimla was successfully completed by involved faculty members in Aug. 2021 for fetching consultancy amount of Rs 29, 95,371.00 (twenty-nine lacs ninty five thousand three hundred seventy-one) for TIFAC CORE NITH.	Feb 2021
4.	Prof. Ashwani Kumar Chandel supervised two M.Tech Dissertations of: (i) Arvind Kumar Sagar selected for Ph.D., NSIT Delhi. (ii) Srikant Bondalapati selected for Ph.D., NIT Silchar.	2021
5.	Dr. Shampy Kamboj, DoMS, Member of scientific committee of GLOSERV 2021,USF, USA	2021
6.	Dr. Shampy Kamboj, DoMS, chairing a session at the Global Conference on Services and Retail Management (GLOSERV 2021) held at USF,USA	April-May,2021
7.	Prof. Rajeevan Chandel supervised Four M.Tech. Dissertations of E&CE students, three of whom are placed as below: i-Samarth Agarwal selected in Qualcom India, Bangalore. ii-Sonalika Singh selected in Vays Infotech Pvt. Ltd. Bangalore. iii-Afreen Haider selected in Nagarro, Gurugram (Gurgaon), Haryana.	April-July, 2021
8.	Prof. Rajeevan Chandel attended online webinar on "GaN on Silicon front-end electronics in advanced microwave and millimeter-wave systems for space and defence", conducted by Prof. Ernesto Limiti, University of Rome, Tor-Vergata, Italy organized by Electronics and Communication Engineering, NITTTR, Chandigarh on 26th August, 2021.	26th Aug, 2021
9.	Prof. Rajeevan Chandel delivered an Expert Lecture on the topic "CMOS VLSI Design - Case Studies & Research Avenues," on 2nd June 2021, in the ATAL FDP Sponsored by AICTE Training and Learning (ATAL) Academy on "Recent Advances and Challenges in Nanoscale Devices: Design, Materials, and Applications Perspective" held from 1st to 5th June 2021, E&CE Department, NIT Hamirpur HP.	01-05 June, 2021
10.	Prof. Rajeevan Chandel received appreciation certificate and a memento for Chairing a Technical Session for the Track: IOT & Embedded Domain, from the organizers of 10th International Symposium on Embedded Computing and System Design (ISED-2021), organized by DA-IICT, Gandhinagar, Gujarat.	July 16 -18 2021
11.	Prof. Rajeevan Chandel has been reviewer for two prestigious International Conferences namely, 25 <sup>th</sup> International Symposium on VLSI Design and Test (VDAT-2021) and 10 <sup>th</sup> International Symposium on Embedded Computing and System Design (ISED-2021).	July 16 -18 2021
12.	Keynote Plenary Lecture was delivered on 12th July 2021 by Prof. Rajeevan Chandel on the topic "CMOS VLSI Design - Case Studies & Emerging Issues," in AICTE Sponsored Short Term Training Program (STTP) on Emerging Issues of VLSI Design, organized by ITM University Gwalior, Madhya Pradesh, India.	12-17 July 2021
13.	Dr. Inder Pal Singh acted as Jury member in PhD. Evaluation at Lovely Professional University, Jalandhar.	April - Sept, 2021
14.	Dr. Inder Pal Singh took part in the jury of Bachelor Programme jury at School of Planning and Architecture, Vijaywada	May- July, 2021
15.	Dr. Puneet Sharma and Dr. Aniket Sharma as resource person at State level workshop on housing under PMAY(U)- Awas par samvaad	Sept 29, 2021
16.	Dr. Inder Pal Singh Member, Board of Studies for Jammu university for Meeting on NEP & curricular revisions.	April- Sept 2021
17.	Expert Talk by Dr. Tapas Palai on "Smart Polymers: Properties and Applications" in Synthesis, Characterization and Performance of Advanced Materials organized by MANIT Bhopal	May 10-14, 2021.
18.	Expert Talk by Dr. Rahul Saha on "Improved Residual Oil Recovery by Chemical EOR Schemes" AICTE Training and Learning (ATAL) Academy, Faculty Development Programme (FDP), Upstream Petroleum Technology, Organized by Dibrugarh University	Nov 23-27, 2020



## Institute Placements

Branch	Eligible Candidates	Placed	% Placement	Total Jobs Offered	% Jobs offered to NITH	Max CTC (in lakhs)
Computer Science & Engg.	84	81	96.43%	116	138.10 %	36 LPA
Computer Science & Engg. Dual Degree	55	53	96.36%	74	134.55 %	23.05 LPA
Electronics & Comm. Engg.	82	62	75.61%	72	87.80%	12 LPA
Electronics & Comm. Engg. Dual Degree	34	21	61.76%	29	85.29%	23.05 LPA
Electrical Engg.	83	46	55.42%	52	62.65%	9.7 LPA
Mechanical Engg.	81	41	50.62%	44	54.32%	35 LPA
Civil Engg.	70	32	45.71%	32	45.71%	9.7 LPA
Chemical Engg.	54	23	42.59%	25	46.30%	6.80 LPA
Architecture	29	2	6.90%	2	6.90%	5.00 LPA
M.Tech (All)	211	26	176.84%	28	191.05 %	23.05 LPA
MBA	13	2	15.38%	2	15.38%	3.71 LPA

## एनआईटी हमीरपुर के छात्र को अमेरिका में 1.51 करोड़ का सालाना पैकेज

उत्तर भारत के एनआईटी में सर्वाधिक पैकेज का दावा; फाइनांस कंपनी में हुई राजस्थान के निशांत की नियुक्ति, सितंबर 2022 से पहले करना होगा ज्वाइन

अमर उजाला न्यूज़

हमीरपुर। नेशनल इंस्टीट्यूट ऑफ टेक्नोलॉजी (एनआईटी) हमीरपुर के 21 वर्षीय छात्र निशांत हाडा को डेढ़ करोड़ रुपये का रिक्त प्लेसमेंट पैकेज मिला है। कंप्यूटर साइंस और इंजीनियरिंग विभाग की दोहरी डिग्री बॉटल और एमटेक के अंतिम वर्ष के छात्र निशांत का चयन अमेरिका की फाइनांस कंपनी ब्लूमबर्ग के लिए हुआ है। सालाना 1.51 करोड़ रुपये का पैकेज पाकर निशांत ने संस्थान के प्लेसमेंट पैकेज के सभी रिकॉर्ड तोड़ दिए हैं। दावा किया जा रहा है कि यह उत्तर भारत के एनआईटी का सर्वोच्च पैकेज है। इससे पूर्व जून 2019 में



निशांत हाडा

कंप्यूटर साइंस और इंजीनियरिंग विभाग की दोहरी डिग्री बॉटल और एमटेक अंतिम वर्ष के छात्र हैं निशांत

■ निशांत के पिता देवेंद्र सिंह प्राइवेट कंपनी में मैनेजर, मां सरिता सिंह स्कूल में सेवकार

1.20 करोड़ रुपये का पैकेज जून 2019 में इसी संस्थान के परम सिंह को मिला चुका है

के छात्र परम सिंह की 1.20 करोड़ के सालाना पैकेज पर अमेरिका की एक साफ्टवेयर कंपनी में नियुक्ति हुई थी। निशांत ने बताया कि इस साल दिसंबर में अपनी डिग्री पूरी करेगा जबकि अमेरिकन कंपनी में सितंबर 2022 से पूर्व ज्वाइनिंग देनी है। निशांत मूलतः राजस्थान के हैं। उनके पिता देवेंद्र सिंह एक प्राइवेट कंपनी में मैनेजर हैं और माता सरिता सिंह स्कूल में सेवकार हैं। एनआईटी हमीरपुर के कार्यकारी निदेशक प्रो. ललित कुमार अवस्थी, रजिस्ट्रार प्रो. योगेश गुप्ता और कंप्यूटर साइंस एवं इंजीनियरिंग विभाग के

विभागध्यक्ष डॉ. टीपी शर्मा ने निशांत और उनके माता-पिता को इस उपलब्धि के लिए बधाई दी है। प्रो. अवस्थी ने बताया कि संस्थान का कार्यभार संभालने के बाद उन्होंने नई शिक्षा नीति विशेष रूप से बहु-प्रवेश-एकाधिक विकास की सुविधा शुरू की है। विद्यार्थियों को लघु शोध निबंध कार्य के साथ इंटरनेट और छात्रों को भविष्य में उद्योग में एक सेमेस्टर की इंटर्नशिप की अनुमति देने के लिए संस्थान योजना बना रहा है। बरात वे छात्रवृत्ति सहित प्रशिक्षण पाने की स्थिति में हों। इससे वे भविष्य में संबंधित कंपनियों में नौकरी पाने में समर्थ होंगे।

### पांच बार दिया ऑनलाइन इंटरव्यू

निशांत ने बताया कि उन्होंने वर्ष 2020 में ब्लूमबर्ग के पूर्ण ऑफिस में आवेदन किया था। कंपनी ने चयन से पूर्व पांच बार ऑनलाइन इंटरव्यू लिया। 31 मई से 6 अगस्त तक कंपनी में काम करने के बाद

उत्कृष्टता को देखते हुए लंदन ऑफिस के लिए उनका चयन हुआ। लेकिन समझौता वाला के बाद निशांत ने न्यूयार्क की अपनी पहली परसंद बताया। कंपनी ने डेढ़ करोड़ से

अधिक सालाना पैकेज सहित प्रो प्लेसमेंट ऑफर लेंटर दिया है। निशांत ने बोटल में 9.55 सीजीपीए हासिल किए हैं। निशांत 2019 में जर्मनी बर्लिन में एक अन्य कंपनी में भी ऑनलाइन इंटरनेट कार्यक्रम में भाग ले चुके हैं। निशांत विश्व की तीन टॉप यूनिवर्सिटी प्रिस्टन, कारनेगी मेलॉन, यूनिवर्सिटी ऑफ अलबर्टा में भी इंटरनेट कर चुके हैं।

## एनआईटी हमीरपुर के छात्र प्रतीक को अमेजन ने दिया 1.12 करोड़ का पैकेज

पूर्व में दो विद्यार्थियों को 1.51 करोड़ और 1.09 करोड़ का मिल चुका है पैकेज अमर उजाला व्यूरो

हमीरपुर। राष्ट्रीय प्रौद्योगिकी संस्थान (एनआईटी) हमीरपुर के छात्रों की देश-विदेश की नामी कंपनियों में मांग बढ़ी है। मंगलवार को बीटेक कंप्यूटर साइंस एंड इंजीनियरिंग के अंतिम वर्ष के छात्र प्रतीक शर्मा को अमेजन बर्लिन से वार्षिक 1.12 करोड़ रुपये वतन पैकेज के साथ ऑफ कैपस प्लेसमेंट ऑफर मिला है। उन्हें गूगल कंपनी से ऑफ कैपस ऑफर और पेटोएम से ऑन कैपस प्लेसमेंट ऑफर भी मिला है। प्रतीक की माता सुमन लता राजकीय उच्च माध्यमिक विद्यालय जोल सपड़ जिला हमीरपुर में शिक्षिका हैं।

इससे पूर्व सितंबर में एनआईटी हमीरपुर के कंप्यूटर साइंस एंड इंजीनियरिंग दोहरी डिग्री के छात्र निशांत हाडा का चयन अमेरिका की एक फाइनेंस कंपनी में 1.51 करोड़ के सालाना पैकेज पर हुआ है। बीटेक कंप्यूटर साइंस अंतिम वर्ष की छात्रा साध्या सूद का चयन अक्टूबर



**50%**  
पहुंचा एनआईटी का  
जॉब प्लेसमेंट एंड  
पैकेज ऑफर इंडेक्स

में यूके की अमेजॉन कंपनी में 1.09 करोड़ के सालाना पैकेज पर हो चुका है। साध्या सूद हिमाचल प्रदेश के सिरमौर जिले के राजगढ़ की रहने वाली हैं। एनआईटी हमीरपुर के निदेशक प्रो. ललित कुमार अवस्थी ने प्रतीक शर्मा को इस उपलब्धि के लिए बधाई दी है।

तीन माह के भीतर एनआईटी हमीरपुर का जॉब प्लेसमेंट एंड पैकेज ऑफर इंडेक्स 50 फीसदी पहुंचा गया है। संस्थान अभी तक अपने 330 विद्यार्थियों की प्लेसमेंट उच्च पैकेज पर करवा चुका है।

11 छात्रों का चयन 32 लाख रुपये के सालाना पैकेज पर, जबकि 50 से अधिक विद्यार्थियों का चयन 16 लाख रुपये के सालाना पैकेज पर हुआ है।

## एनआईटी हमीरपुर की साध्या को यूके की कंपनी में 1.09 करोड़ का पैकेज

बीटेक अंतिम वर्ष में पढ़ रही हैं सिरमौर के राजगढ़ की छात्रा अमर उजाला व्यूरो



साध्या सूद

सितंबर में  
निशांत का डेढ़  
करोड़ के  
पैकेज पर हुआ  
था अमेरिका  
की कंपनी  
में चयन

हमीरपुर। नेशनल इंस्टीट्यूट ऑफ टेक्नोलॉजी (एनआईटी) हमीरपुर की एक छात्रा को यूके की कंपनी ने 1.09 करोड़ के सालाना पैकेज पर नौकरी ऑफर की है। बीटेक अंतिम वर्ष की छात्रा साध्या सूद यूके में अमेजॉन कंपनी में सेवाएं देंगी। साध्या सूद हिमाचल प्रदेश के सिरमौर जिले के राजगढ़ की रहने वाली हैं।

साध्या के पिता प्रदीप सूद एक व्यवसायी हैं, जबकि माता डोली सूद बीएसएनएल से सेवानिवृत्त हुई हैं। जेईई की परीक्षा देने के बाद साध्या सूद का चयन एनआईटी हमीरपुर में कंप्यूटर साइंस एंड इंजीनियरिंग विभाग में हुआ था। एनआईटी हमीरपुर ने लगातार दूसरे माह अपने छात्र की एक करोड़ से अधिक के सालाना पैकेज पर प्लेसमेंट करवाई है। सितंबर में

एनआईटी हमीरपुर के कंप्यूटर साइंस एंड इंजीनियरिंग दोहरी डिग्री के छात्र निशांत का चयन अमेरिका की एक फाइनेंस कंपनी में 1.51 करोड़ के सालाना पैकेज पर हुआ है। साध्या सूद ने बताया कि यूके की इस कंपनी में चयन के लिए करीब 10 सप्ताह तक चलने वाली ऑनलाइन इंटरव्यू प्रक्रिया से उसे गुजरना पड़ा है। एनआईटी हमीरपुर के निदेशक डॉ. ललित कुमार अवस्थी और संस्थान के ट्रेनिंग एंड प्लेसमेंट अफसर डॉ. भारत भूषण शर्मा ने साध्या को बधाई दी है।

## Other Institute Activities



*Student Activity Centre Inaugurated By:-*

*Sh. Anurag Singh Thakur , Hon'ble Minister of State for Finance & Corporate Affairs (G.O.I)*  
*In the Presence of*

*Prof. Lalit Kumar Awasthi, Director, National Institute of Technology, Hamirpur(HP)*



*Fitness ki dose aadha Ghanta RoZ*

*FIT INDIA FREEDOM RUN - 20*

13-08-2021





## National Institute of Technology Hamirpur (HP)



### FIT INDIA FREEDOM WALK

BY FACULTY & STAFF OF NIT HAMIRPUR



### 11<sup>th</sup> Convocation

18<sup>th</sup> JANUARY 2021



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



### "SWACHH BHARAT ABHIYAN" Cleanliness Event Organized on 2<sup>nd</sup> October 2020 in NIT Campus

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