

MIECH-TIMES

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In Photo: Faculty of Department of Mechanical Engineering

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Faculty Achievements

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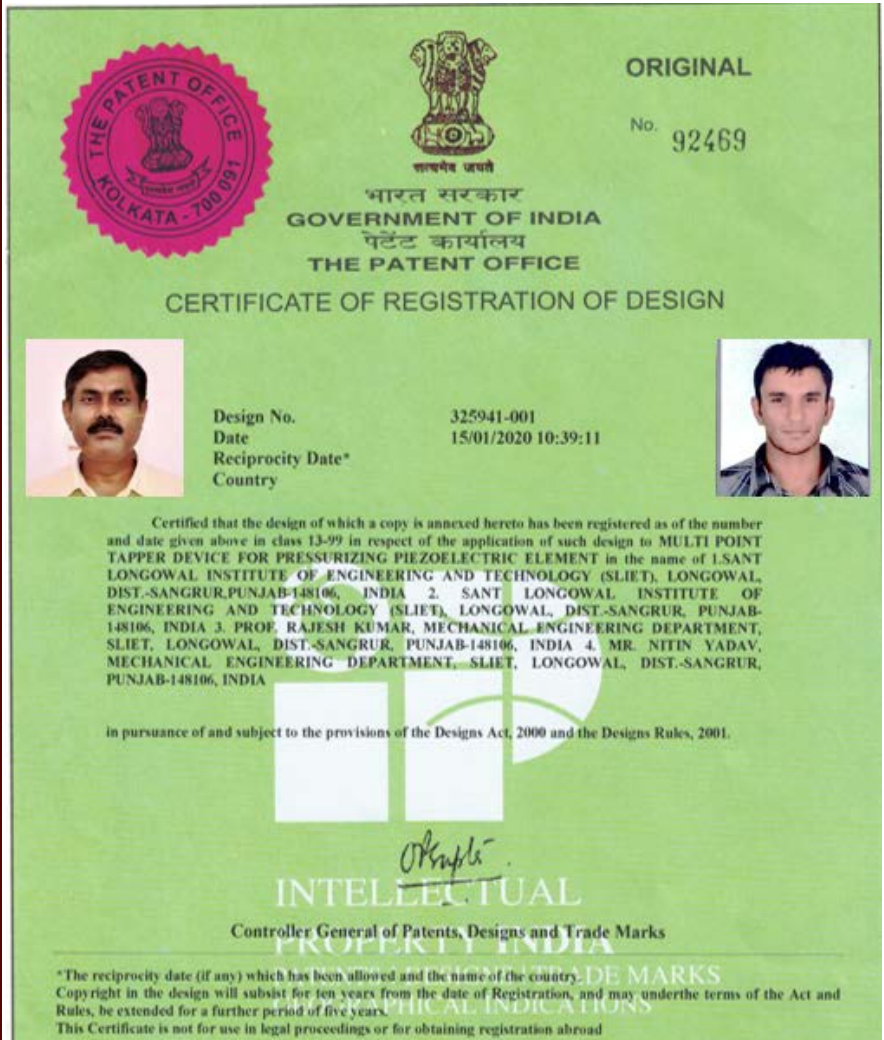
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1. A design patent (No. 325941-001, dated 15.01.2020) on “Multi point tapper device for pressurizing piezoelectric element” has been granted (date of issue: 28.10.2020) to Sant Longowal Institute of Engineering & Technology, Prof. Rajesh Kumar and Ph.D. Scholar Mr. Nitin Yadav of Mechanical Engineering Department.



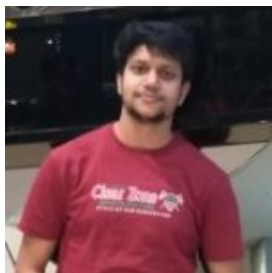
Education is the most powerful weapon which you can use to change the world.

~ Nelson Mandela ~

2. "ULEKTZ WALL OF FAME - 2020 Certificate" awarded to **Prof. Arvind Jayant** by the Academic Council of ULEKTZ as one of the **Top 50 Expert Faculties** in the field of Automobile/ Bio-Chemical /**Industrial Engineering** / Environmental / Ceramic / Bio-Technology Engineering Across India for the year 2019.



Joining of New Faculty Members



Divesh Bharti

1. M.Tech. (Mechanical Engineering with specialization in Energy System), IIT Mandi, Himachal Pradesh. 2019
2. B.E. (Mechanical Engineering with specialization in Manufacturing Engineering), SLIET Longowal. 2017
3. Diploma (Mechanical Engineering), Govt. Polytechnic Kangra, Himachal Pradesh. 2014



Dr. Yogesh Verma

1. Ph.D. (2014-2019) in Structural Vibration from Indian Institute of Technology, Kharagpur
2. M.Tech (2012-2014) in Machine Design and Analysis from National Institute of Technology, Rourkela
3. B.Tech (2006-2010) in Mechanical Engineering from U.P.T.U (G.B.T.U)

Collaborative Activities

1. Department of Mechanical Engineering of Sant Longowal Institute of Engineering and Technology in collaboration with Mechanical Engineering Department of NIT Uttarakhand has organized TEQIP-III sponsored One-week Faculty Development Programme (FDP) on "2D Graphics for Scientific Reporting" during July 27-31, 2020 at Sant Longowal Institute of Engineering and Technology, Longowal (Punjab).
2. A One Week Short-term Training Program on "Computational Techniques and Programming" for UG students sponsored by TEQIP-III was jointly organized by Department of Mechanical Engineering, National Institute of Technology, Uttarakhand and SLIET Longowal during July 20-25, 2020.

Short Term Courses Organized by the Department

1. Department of Mechanical Engineering, SLIET Longowal had organised a one week online short-term course on "Energy Management for Economic Prosperity and Ecological Stability – (EMEPES-2020)", sponsored under QIP by AICTE, New Delhi during Sept 21-26, 2020. The event was Coordinated by Dr. R. K. Yadav & Dr. Indraj Singh under chairmanship of Prof. Rajesh Kumar, HOD (Mechanical Engineering).



Experts

 Mr. Krishna Kumar G Certified Energy Auditor Project Associate International Capco Association India Topic—Green House Gas Emission	 Mr. Ankur Mantri Regional Manager West M/S. Design Zecospay services LLP Topic— HVAC Systems & Building Commissioning
 Prof. Mandeep Singh Certified Energy Auditor Thapar Institute of Engineering and Technology, Patiala Topic—General Aspects of Energy Management/Audit.	 Dr. Aitar Singh Certified Energy Auditor EX-Dirctor National Power Training Institute Topic—Audit in Power Industry
 Prof. Sanjeev Singh MSEE Design Topic—Efficient use of Motor & Transformer.	 Dr. C.S. Ajad Certified Energy Auditor, RWNT Topic—Roof top PV solar Installation
 Dr. Rituparn Dutta Instructor and Researcher in School of Computing USA Topic—Optimization and Predictive Learning for Energy Management	 Dr. Sushil Sharma Worked in Reputed Firms like Varadhana, Aditya Birla Group Topic—Energy Audit in Textile Industry
 Dr. J.S. Anjlia Chief General Manager (Technical) Energy Efficiency Services Limited, New Delhi. Topic—Energy Saving potential in Pump.	 Dr. Mokund V Bhandare CEO, K.R. Bhooshto Techao Associates Pvt Ltd, Nashik. Topic—HVAC
 Dr. RK Yadav Additional General Manager, Pragas Power Corporation Limited Certified Energy Auditor Topic—Audit in Sugar Industry	 Dr. Satvinder Singh CPWD, Engineers (Retd.) Ludhiana, Certified Energy Auditor Topic—Energy audit of a commercial building
 Mr. Puneet Hegde IIT Kanpur Topic—Energy Audit in Foundry Industry	 Prof. MK Aware IIT Nagpur Topic—Power quality issue and its Impact in Energy on Steel Rolling Industry
 Dr. Anil Kumar Professor, DTU, Delhi Topic—Use of Solar Energy in Industry	 Dr. Ball Singh Certified Energy Auditor, Director, Nandhari Eco Energy Pvt Ltd Topic—Audit in Paper Industry



A One Week ONLINE SHORT TERM COURSE (STC) on "Energy Management for Economic Prosperity and Ecological Stability" (SEPTEMBER 21—26, 2020)



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- One week online short-term course (e-STC) on 'Advanced Manufacturing Technology & Applications (AMTA 2020)' was held in the Department of Mechanical Engineering, SLIET, Longowal from 23 -28 November 2020. The Co-Ordinator's of e-STC AMTA 2020 were Prof. Shankar Singh and Dr. Indraj Singh. The Chairman AMTA 2020 was Prof Rajesh Kumar, HOD (Mechanical).

The objective of the online short- term course AMTA 2020 was to share with the participants the cutting-edge research and developments, carried out/observed, by the speakers in advanced manufacturing domain, for products having immediate industrial applications, for "Atma Nirbhar Bharat". The speakers are distinguished research faculties from Foreign Universities (Hungry, Northern Ireland and South Africa), IIT's, NIT's and other well reputed institutions.



Sponsored by QIP (Quality Improvement Program)
AICTE, Govt. of India

ONE WEEK ONLINE SHORT TERM COURSE (e-STC)
On
Advanced Manufacturing Technology & Applications
(AMTA 2020)
(23 -28 November 2020)

Chairman: Prof. Rajesh Kumar
Coordinators: Prof. Shankar Singh, Dr. Indraj Singh

Organized by:
Department of Mechanical Engineering
Sant Longowal Institute of Engineering & Technology
(Deemed to be University under Ministry of Education (MoE) India)
Longowal -148106, Sangrur (Punjab)



3. A STC on “Implications and Realities of Industry 4.0” under TEQIP-III was organized by the Department of Mechanical Engineering, SLIET Longowal during 21-25th December 2020. The event was Coordinated by Dr. Sunil Kumar, Dr. Harish Arya & Er. Sumit Kumar.

Technical Sessions Chaired/Technical Program Committee Members in Different Conferences

1. Dr Shankar Singh, Professor (Mechanical Engg.) acted as Session Chair (online mode) of Technical Session in 11th International Conference on Materials Processing & Characterization-2020 (ICMPC 2020) organized by Department of Mechanical Engineering, Indian Institute of Technology, Indore (IIT, Indore) during 15-17 December 2020.
2. Dr. Vivek Kumar, Assistant Professor, SLIET Longowal acted as Session Chair of Technical Session in AICTE sponsored 3rd International E-Conference on “Cutting Edge Technological Challenges in Mechanical Engineering (CETCME-2020)” organized by Noida Institute of Engineering & Technology (NIET), Greater Noida during 21-22 August, 2020.
3. Dr. Vivek Kumar, Assistant Professor, SLIET Longowal served as Member, Technical Program Committee in The 7th International Symposium on Innovation & Sustainability of Modern Railway (ISMR’ 2020) held during October 23-25, 2020
4. Dr. Sunil Kumar, Assistant Professor, SLIET Longowal Chaired the session in Virtual format for track: Role of Materials in Industrial Engineering in the International Conference-CAMSE-2020 held during December 28-30, 2020 organized by B R Ambedkar National Institute of Technology, Jalandhar, Punjab.
5. Dr. Indraj Singh, Associate Professor, SLIET Longowal chaired a session in International conference on Futuristic and Sustainable Aspects in Engineering and Technology (FSAET-2020) Organized by Department of Mechanical & Civil Engineering of GLA University Mathura, UP, during December 18-19, 2020.

Guest Editor for the Journal “ Measurement”

Prof. Rajesh Kumar, HOD (ME) has been assigned to handle a Special Issue on “Condition Monitoring and Defects Prognosis of Mechanical Systems” as one of the Guest Editors for the Journal “Measurement” published by Elsevier.

"If you fail, never give up because FAIL means "First Attempt In Learning".

-Dr. A. P. J. Abdul Kalam

Expert Lectures Delivered

1. An expert lecture on “Condition Monitoring of Machine Elements and Structures” was delivered by Prof. Rajesh Kumar in the TEQIP-III Supported Short Term Course on “Computational and Experimental Studies on Failure of Materials” organized by Department of Industrial and Production Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar during September 13-17, 2020.
2. Dr. Sunil Kumar, Assistant Professor, Mechanical Engineering Department, SLIET Longowal has delivered expert lectures in three different FDP/STC/STTP organized by National Institute of Technology Uttarakhand, SLIET Longowal and DIT University Dehradun, Uttarakhand in the month of July and August 2020.
3. Er. Surinder Kumar, Assistant Professor in the Mechanical Engineering Department, SLIET Longowal has delivered expert lectures in FDP/STTP organized by Vishwavidyalaya Engineering College, Lakhanpur, Ambikapur (Chhattisgarh) and another at SLIET Longowal during July and September 2020.
4. Dr. Rajesh Kumar, Professor and Head (Mechanical Engineering) delivered expert talk in Industry & Academia Conclave on The Future of Engineers: Opportunity and Challenges Today and Tomorrow; organized online by Punjab Engineering College, Chandigarh under TEQIP-III during December 10-12, 2020.
5. Dr. Sunil Kumar, Assistant Professor, SLIET Longowal trained Seventy-Five Students through online training in the field of "Robotics and Automation" during 1st Oct. to 14th Nov. 2020 in coordination with NPIU.
6. Dr. Sunil Kumar, Assistant Professor, SLIET Longowal delivered an expert talk in one-week Faculty Development Program on “Tools and Techniques for Effective Research” held during December 14-18, 2020 organized by IKGPTU, Amritsar Campus.

Talent wins games, but
teamwork and
intelligence win
championships.”

Michael Jordan

Publications

1. Bansal, Anuj, Deepak Kumar Goyal, Prabhjot Singh, Anil Kumar Singla, Munish Kumar Gupta, Niraj Bala, Jayant Kolte, and Gautam Setia. "Erosive wear behaviour of HVOF-sprayed Ni-20Cr2O3 coating on pipeline materials." *International Journal of Refractory Metals and Hard Materials* 92 (2020): 105332.
2. Bansal, Anuj, Anil Kumar Singla, Vinay Dwivedi, Deepak Kumar Goyal, Jonny Singla, Munish Kumar Gupta, and Grzegorz M. Krolczyk. "Influence of cryogenic treatment on mechanical performance of friction stir Al-Zn-Cu alloy weldments." *Journal of Manufacturing Processes* 56 (2020): 43-53.
3. Bansal, Anuj, Jagtar Singh, and Harpreet Singh. "Investigating slurry erosion behavior of a hydro-machinery steel under various impingement variables." *Materials Today: Proceedings* (2020).
4. Singh, Maninder, and Shankar Singh. "Multi Objective Optimization of Electro Discharge Machining of Nimonic 75 Using Taguchi Based Grey Relational Analysis." *Journal of Advanced Manufacturing Systems* (2020).
5. Verma, Anmol Singh, and Shankar Singh. "Parametric optimization of silicon slicing using wire electro discharge machining." *Materials Today: Proceedings* (2020).
6. Kumar, Sunil, Gayatri Brahma, Prabhkiran Kaur, and Brijesh Kumar Gupta. "A case study on quality improvement of connecting rod assembly line using Six Sigma DMAIC cycle." *International Journal of Six Sigma and Competitive Advantage* 12, no. 2-3 (2020): 234-249.
7. Jayant, Arvind, Shweta Singh, and Tanmay Walke. "A Robust Hybrid Multi-criteria Decision-Making Approach for Selection of Third-Party Reverse Logistics Service Provider." In *Advances in Production and Industrial Engineering*, pp. 423-443. Springer, Singapore, 2020.
8. Jayant, Arvind, Anshul Agarwal, and Vaibhav Gupta. "Application of Machine Learning Technique for Demand Forecasting: A Case Study of the Manufacturing Industry." In *Advances in Production and Industrial Engineering*, pp. 403-421. Springer, Singapore, 2020.
9. Singh, Sumeet, Jastej Singh, and A. S. Shahi. "Investigation on Aging-Induced Degradation of Impact Toughness and Corrosion Performance of Duplex Stainless Steel Weldment." *Transactions of the Indian Institute of Metals* 73, no. 11 (2020): 2747-2765.
10. Malhotra, Dikshant, Amandeep S. Shahi, and Kamal Gupta. "Effect of GTAW remelting on the corrosion performance of AISI 316L cladding." *Materials and Corrosion* 72, no. 1-2 (2021): 141-153.
11. Mann, Harjeet S., and Pradeep K. Singh. "Energy recovery ducted turbine (ERDT) system for chimney flue gases-A CFD based analysis to study the effect of number of blade and diffuser angle." *Energy* 213 (2020): 118501.

12. Gupta, Munish Kumar, Qinghua Song, Zhanqiang Liu, Murat Sarikaya, Muhammad Jamil, Mozammel Mia, Anil Kumar Singla, Aqib Mashood Khan, Navneet Khanna, and Danil Yu Pimenov. "Environment and economic burden of sustainable cooling/lubrication methods in machining of Inconel-800." *Journal of Cleaner Production* 287 (2021): 125074.
13. Agrawal, Chetan, Navneet Khanna, Catalin Iulian Pruncu, Anil Kumar Singla, and Munish Kumar Gupta. "Tool wear progression and its effects on energy consumption and surface roughness in cryogenic assisted turning of Ti-6Al-4V." *The International Journal of Advanced Manufacturing Technology* 111, no. 5 (2020): 1319-1331.
14. Gupta, Munish Kumar, Qinghua Song, Zhanqiang Liu, Murat Sarikaya, Muhammad Jamil, Mozammel Mia, Vinod Kushvaha, Anil Kumar Singla, and Zhixiong Li. "Ecological, economical and technological perspectives based sustainability assessment in hybrid-cooling assisted machining of Ti-6Al-4 V alloy." *Sustainable Materials and Technologies* 26 (2020): e00218.
15. Gupta, Munish Kumar, Anil Kumar Singla, Hansong Ji, Qinghua Song, Zhanqiang Liu, Wentong Cai, Mozammel Mia, Navneet Khanna, and Grzegorz M. Krolczyk. "Impact of layer rotation on micro-structure, grain size, surface integrity and mechanical behaviour of SLM Al-Si-10Mg alloy." *Journal of Materials Research and Technology* 9, no. 5 (2020): 9506-9522.
16. Anil Kumar, C.P.Gandhi, Yuqing Zhoua, Govind Vashishtha, Rajesh Kumar, Jiawei Xianga "Improved CNN for the diagnosis of engine defects of 2-wheeler vehicle using wavelet synchro-squeezed transform (WSST)" Volume 208, 15 November 2020, 106453.
17. Anil Kumar, C.P.Gandhi, Zhoua Yuqing, Rajesh Kumar "Variational mode decomposition based symmetric single valued neutrosophic cross entropy measure for the identification of bearing defects in a centrifugal pump". volume 165 August 2020, 107294.
18. Lucky, H.K. Arya "Improvement of low temperature impact toughness through flux modification for submerged arc welded low carbon steel E350 plates". July 2020 *Indian Journal of Science and Technology* 13(25):2582-2592
19. Jastej Singh, A.S. Sahi "Weldability Aspects of Electron Beam Welded Duplex Stainless Steel"December 2020 In book: *Recent Advances in Welding* (pp.223-266) Publisher: Nova Science Publishers, Inc. New York, USA.
20. Dikshant Malhotra Amandeep S. Shahi Kamal Gupta "Effect of GTAW remelting on the corrosion performance of AISI 316L cladding" September 2020 *Materials and Corrosion* 72(1-2).
21. Kumar, Sumit, and Pardeep Gupta. "Case Study on Business Excellence Issues of an Indian Automobile Manufacturer using SAP-LAP Framework." 2020 *International journal on emerging technologies*, 11(3): 911-918



Research is to see what everybody
else has seen, and to think what
nobody else has thought.

— Albert Szent-Gyorgyi —