JULY-DEC 2024

MECH-TIMES

Volume IV
ISSUE II

Transforming Ideas into Machines, and Machines into Marvels of Engineering Excellence

DEPARTMENT OF MECHANICAL ENGINEERING

Contents

Message from the Director,

As we celebrate the success and progress of the **Mechanical Engineering Department** at SLIET Longowal, I extend my heartfelt congratulations to the entire Department for its dedication to excellence in **Teaching, Research, and Innovation**.

The Department of Mechanical Engineering has consistently been at the forefront of **Academic and Research** endeavors. I am proud to highlight SLIET's remarkable performance in the **NIRF 2024 Rankings: 76th in the Engineering Category and 85th in the University Category**. These milestones reflect our relentless pursuit of excellence and our commitment to fostering a culture of innovation and academic rigor.

What we value the most at SLIET is our people, the community of **Students, Faculty, and Staff**, whose hunger for knowledge and commitment to work make every day an inspiring and enriching experience for all of us.

Let us continue to strive together for **Academic and Research Excellence**, setting benchmarks for **Innovation** and contributing meaningfully to society.

Best wishes,

Prof. Mani Kant Paswan

Message from the Head of the Department

The Department of Mechanical Engineering preserves its achievements and publish its all activities every six monthly in a newsletter named “MECH-TIMES”.

The Mechanical Department not only aims to make our students technically sound and knowledgeable but also to nurture their wisdom and make them a better and responsible human being. We hope that we will continue to deliver our best to serve the society and mankind. It is also expected that our students will continue to pass on the skills which they have developed during their stay at this department to the whole of the world for a better society.

With the untiring efforts of our accomplished faculty, staff and talented students, we will be able to make rapid progress on our path of continuous growth.

Dr. Shankar Singh

Professor & Head
Department of Mechanical Engineering

Message from the Editor

It gives me immense pleasure to present the latest edition of MechTimes, the official half-yearly magazine Vol. 4 Issue 2 of the Department of Mechanical Engineering, SLIET Longowal. This magazine continues to be a platform for showcasing the brilliance, creativity, and hard work that define the Mechanical Department.

I would like to extend my heartfelt thanks to all contributors, the editorial team, and everyone who made this publication possible. Your collective efforts continue to make MechTimes a cherished and insightful read for all.

Let this edition be a source of motivation and inspiration for all.

Happy Reading!

Warm Regards,

Dr. Vivek Kumar
Editor, MechTimes
Department of Mechanical Engineering
SLIET Longowal

International conferences attended by Faculty

1. Prof. A. S. Shahi (Dean Academic) and Prof. R. K. Saxena have attended the 8th International Conference on Manufacturing, Material, and Metallurgical Engineering in Yokohama, Japan, from July 12-14, 2024. The conference provided an incredible opportunity to engage with cutting-edge research and innovations in the fields of manufacturing, materials, and metallurgical engineering. Their participation not only brings new knowledge and learning back to our department but also strengthens our global connections and collaborative spirit

2. Prof. Pardeep Gupta, Dr. Sunil Kumar, and Dr. Sumit Kumar had attended 7th European Conference on Industrial Engineering and Operations Management, held in Augsburg (Greater Munich), Germany, from July 16-18, 2024. Hosted by the Technical University of Applied Sciences Augsburg, the conference cantered around the theme "AI-Based Resilient Manufacturing and Supply Chain," offering valuable insights into the evolving landscape of industrial engineering. Their engagement in this prestigious international forum underscores the department's unwavering commitment to academic excellence, research innovation, and global collaboration

Faculty Development Programs

1. Faculty Development Program (FDP) on "Advanced Functional Materials 2024: Current Research and Innovations"

A Two-Week Faculty Development Program (Hybrid Mode) on **Faculty Development Program (FDP) on 'Advanced Functional Materials AFM 2024' (Current Research, Innovation and Applications) (29th July 2024 to 09th August 2024)** was held from 29th July 2024 to 09th August 2024 in the Department of Mechanical Engineering.

The Chairperson of FDP-AFM 2024 is **Prof. Shankar Singh**, Head of the Department (Mechanical). The Coordinators of FDP- AFM 2024 is Dr Harish Arya (Mechanical) and Dr (Ms) Subita Bhagat.

The objective of this FDP is to provide in-depth knowledge of Advanced Functional Materials, their fundamental characteristics, synthesis, characterization and applications in the advancement of Science and Technology, in different domains. A total of eligible 147 participants from different Engineering Universities/Institutes/Colleges attended the FDP - AFM 2024 in online/offline mode.

Inauguration of AFM 2024

Valedictory Function of AFM 2024

2. Short Term Training Programme (STTP) Cum Faculty Development Programme (FDP) on MATLAB Programming and Applications in Engineering

A Short Term Training Programme (STTP) cum Faculty Development Programme (FDP) on ***MATLAB Programming and Applications in Engineering*** was organized by the SLIET Mechanical Engineering Society (SMES) and coordinated by Dr. R.K. Saxena and Dr. Mohd. Majid. The program, conducted from September 23 to September 30, 2024, aimed to equip participants with a thorough understanding of MATLAB and its diverse applications in engineering.

Participants learned the basics of MATLAB installation, syntax, and programming, followed by more advanced topics such as diffusion-rate models, FEM, machine learning, and solving complex engineering problems. Notable sessions included the application of MATLAB in electrical engineering for circuit simulations, the use of image processing tools, and the implementation of machine learning algorithms. The final day allowed participants to work on integrated projects, showcasing the skills they had acquired throughout the program.

This STTP/FDP successfully enhanced the professional and research skills of the participants, preparing them for practical and advanced applications of MATLAB in engineering contexts.

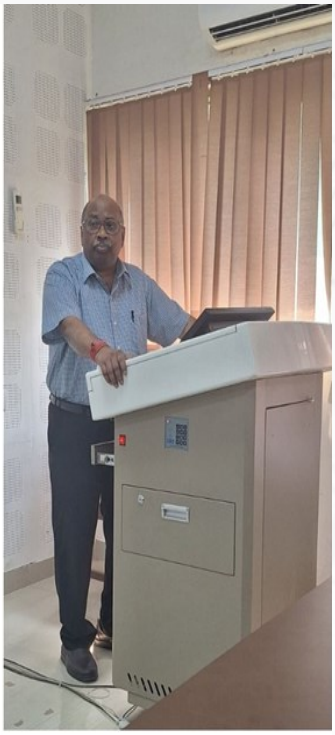
3. Faculty Development Program (FDP) on Outcome-Based Education (OBE 2024)

A One Week Faculty Development Program (Hybrid Mode) on **'Outcome Based Education (OBE 2024) (Evaluation, Implementation and Faculty Development)'** was held from 21- 25 October 2024, in the Department of Mechanical Engineering.

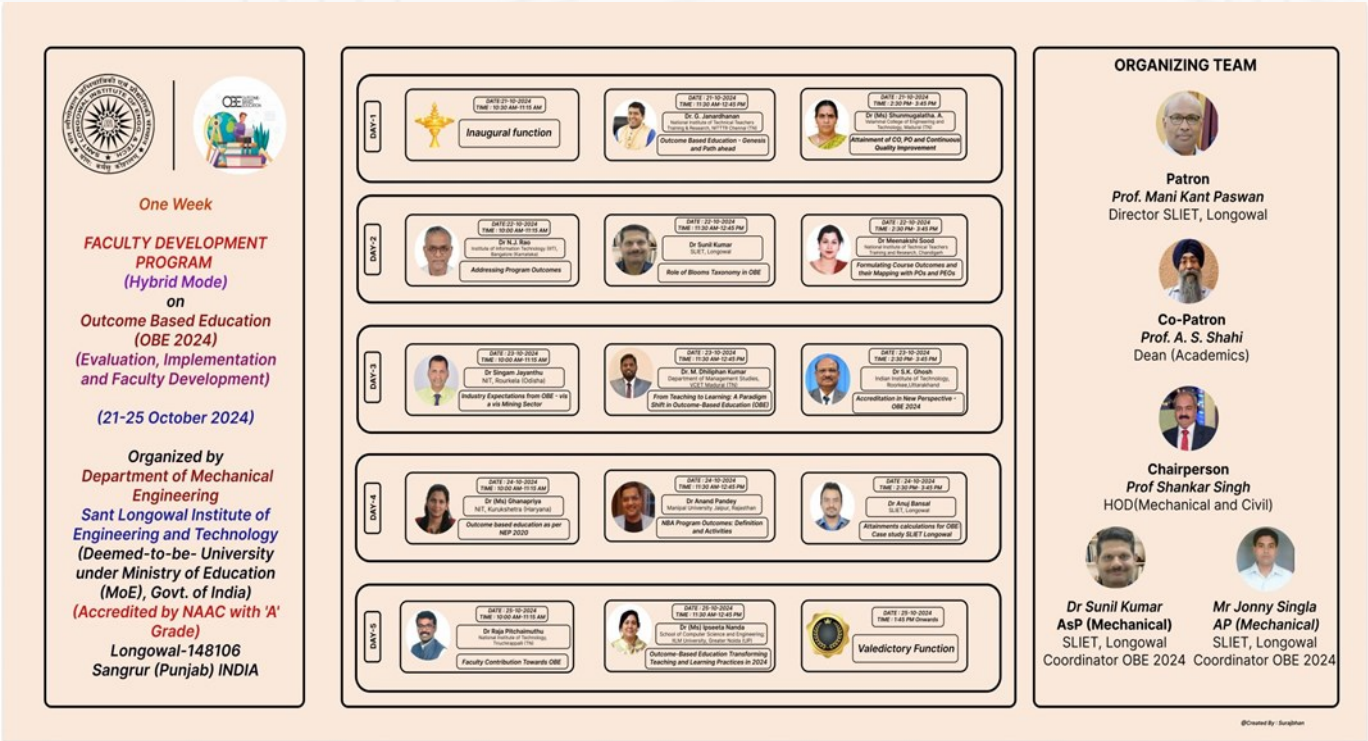
The Chairperson of FDP-OBE 2024 is **Prof. Shankar Singh**, Head of the Department (Mechanical & Civil Engg.) The Coordinators of FDP- OBE 2024 are Dr Sunil Kumar (Mechanical) and Er. Jonny Singla.

The FDP on OBE addressed the need to enhance the knowledge about the latest Outcome Based Education (OBE) its implications in teaching, assessment, evaluation and accreditation.

The relevance of outcome-based education and its relationship to teaching-learning outcomes are becoming more prevalent in higher education institutions. A total of eligible 104 participants from different Engineering Universities/Institutes/Colleges attended the FDP -OBE 2024.



Inauguration of FDP on OBE


One Week
FACULTY DEVELOPMENT PROGRAM
(Hybrid Mode)
on
Outcome Based Education (OBE 2024)
(Evaluation, Implementation and Faculty Development)
(21-25 October 2024)
Organized by
Department of Mechanical Engineering
Sant Longowal Institute of Engineering and Technology
(Deemed-to-be- University under Ministry of Education (MoE), Govt. of India)
(Accredited by NAAC with 'A' Grade)
Longowal-148106
Sangrur (Punjab) INDIA
DAY-1
DATE : 21-10-2024 TIME : 10:30 AM-11:15 AM
Inaugural function
DATE : 21-10-2024 TIME : 11:30 AM-12:45 PM
Dr. G. Jaharbhavan
National Institute of Technical Teachers Training & Research, MHRD Chennai (TN)
Outcome Based Education - Genesis and Path ahead
DATE : 21-10-2024 TIME : 2:30 PM- 3:45 PM
Dr (Ms) Shunmugalatha. A.
Velammal College of Engineering and Technology, Madurai (TN)
Attainment of CO, PO and Continuous Quality Improvement
DAY-2
DATE:22-10-2024 TIME : 10:00 AM-11:15 AM
Dr N.J.Rao
Institute of Information Technology (IIIT), Bangalore (Karnataka)
Addressing Program Outcomes
DATE : 22-10-2024 TIME : 11:30 AM-12:45 PM
Dr Sunil Kumar
SLIET, Longowal
Role of Blooms Taxonomy in OBE
DATE : 22-10-2024 TIME : 2:30 PM- 3:45 PM
Dr Meenakshi Sood
National Institute of Technical Teachers Training and Research, Chandigarh
Formulating Course Outcomes and their Mapping with POs and PEOs
DAY-3
DATE : 23-10-2024 TIME : 10:00 AM-11:15 AM
Dr Singam Jayanthu
NIT, Rourkela (Odisha)
Industry Expectations from OBE - vis a vis Mining Sector
DATE : 23-10-2024 TIME : 11:30 AM-12:45 PM
Dr. M. Dhilipkan Kumar
Department of Management Studies, VCET Madurai (TN)
From Teaching to Learning: A Paradigm Shift in Outcome-Based Education (OBE)
DATE : 23-10-2024 TIME : 2:30 PM- 3:45 PM
Dr S.K. Ghosh
Indian Institute of Technology, Roorkee,Uttarakhand
Accreditation in New Perspective - OBE 2024
DAY-4
DATE : 24-10-2024 TIME : 10:00 AM-11:15 AM
Dr (Ms) Ghanapriya
NIT, Kurukshetra (Haryana)
Outcome based education as per NEP 2020
DATE : 24-10-2024 TIME : 11:30 AM-12:45 PM
Dr Anand Pandey
Manipal University, Jaipur, Rajasthan
NBA Program Outcomes: Definition and Activities
DATE : 24-10-2024 TIME : 2:30 PM- 3:45 PM
Dr Anuj Bansal
SLIET, Longowal
Attainments calculations for OBE: Case study SLIET Longowal
DAY-5
DATE : 25-10-2024 TIME : 10:00 AM-11:15 AM
Dr Raja Pitchaimuthu
National Institute of Technology, Tiruchirappalli (TN)
Faculty Contribution Towards OBE
DATE : 25-10-2024 TIME : 11:30 AM-12:45 PM
Dr (Ms) Ipseeta Nanda
School of Computer Science and Engineering, SLM University, Greater Noida (UP)
Outcome-Based Education Transforming Teaching and Learning Practices in 2024
DATE : 25-10-2024 TIME : 1:45 PM Onwards
Valedictory Function
ORGANIZING TEAM
Patron
Prof. Mani Kant Paswan
Director SLIET, Longowal
Co-Patron
Prof. A. S. Shahi
Dean (Academics)
Chairperson
Prof Shankar Singh
HOD(Mechanical and Civil)
Dr Sunil Kumar
AsP (Mechanical)
SLIET, Longowal
Coordinator OBE 2024
Mr Jonny Singla
AP (Mechanical)
SLIET, Longowal
Coordinator OBE 2024
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Faculty Achievements

1. The Outstanding Professor Award

Prof. Pardeep Gupta was awarded the Outstanding Professor Award at the 7th European Conference on Industrial Engineering and Operations Management in Augsburg, Germany. This prestigious recognition highlights Prof. Gupta's exceptional contributions to the field of industrial engineering and his unwavering dedication to academic excellence. We are incredibly proud of his achievement and the honor it brings to our department.

IEOM

IEOM Society International

7th European International Conference on
Industrial Engineering and Operations Management
Augsburg, Germany, July 16-18, 2024, Host: Technical University of Applied Sciences Augsburg

Outstanding Professor Award

This is to certify that

Dr. Pardeep Gupta
Professor, Department of Mechanical Engineering, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur (Punjab), India

In Recognition and Appreciation of an Outstanding in Reliability and Maintainability Engineering in the Industrial Engineering and Operations Management Profession.
Presented at the Conference Awards Ceremony on July 18, 2024.

Dr. Jürgen H. Lenz
Conference Chair
Research Professor – AI in Manufacturing
Technical University of Applied Sciences Augsburg
Augsburg, Bavaria, Germany

Dr Ahad Ali
Conference Co-Chair
Associate Professor and Director of Industrial Engineering Program, Lawrence Tech University
Southfield, Michigan, USA
Executive Director, IEOM Society

Professor Don Reimer
Program Chair
Chief Operating Officer
IEOM Society International
Southfield, Michigan, USA

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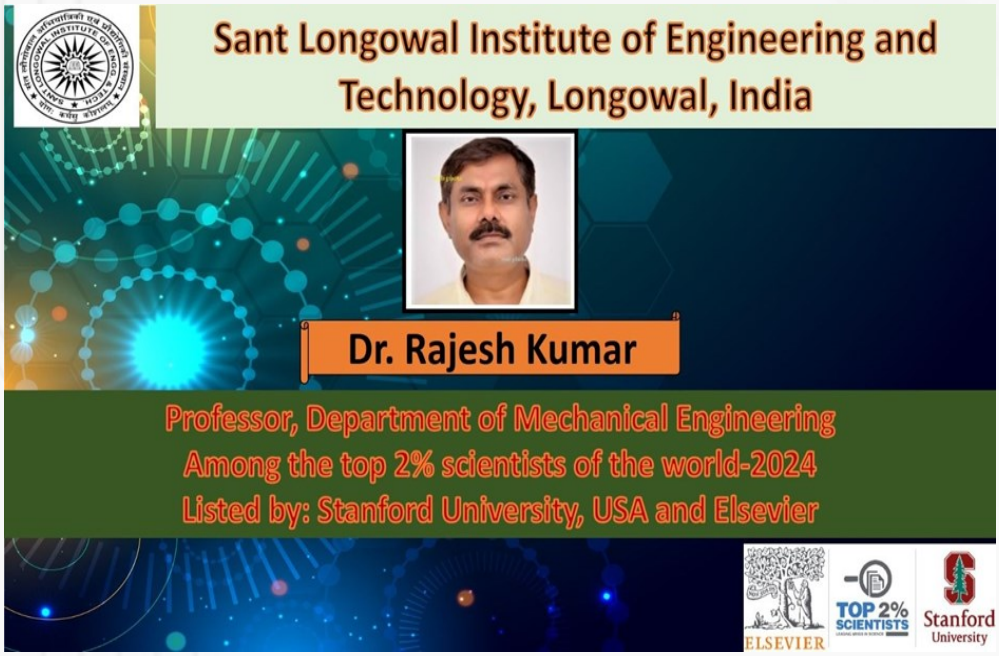
IEOM Society International - a 501(c)(3) nonprofit organization, 21411 Civic Center Dr., Suite # 205, Southfield, MI 48076, info@ieomsociety.org

2. Dr. Rajesh Kumar, Professor in the Mechanical Engineering Department at SLIET Longowal, is recognized among the world's top 2% scientists in Stanford University's prestigious list, released on September 16, 2024. Dr. Rajesh Kumar has achieved a remarkable global ranking of 3,34,574 in the field of Engineering and an outstanding subfield rank of 767 out of 35,283 in Applied Acoustics. This prestigious recognition highlights his significant contributions to research and innovation in his field.



3. Dr. Anil Kumar Singla, Associate Professor, Mechanical Department, and Dr. Anuj Bansal, Assistant Professor, Mechanical Department, SLIET Longowal, have been awarded a Certificate of Appreciation for the granting of their patent titled "A PORTABLE APPARATUS FOR CLEANSING FRUITS AND VEGETABLES AND METHOD THEREOF" as inventors.

4. Dr. Harish Kumar Arya, Associate Professor, Mechanical Engineering Department, has been awarded the ISTE Section Best Teacher Award 2024 at the ISTE Section Faculty Convention held on 25th October 2024 at Bhai Gurdas Institute of Engineering and Technology, Sangrur, Punjab.

Industrial Visit

The Department of Mechanical Engineering, SLIET Longowal organized an industrial visit for the 3rd-year GME students to the Rail Coach Factory (RCF), Kapurthala, on 16th November 2024. The visit aimed to provide students with hands-on exposure to rail coach manufacturing and assembly processes while enhancing their understanding of real-world engineering practices.

The visit was accompanied by Dr. Vivek Kumar, Coordinator, Industrial Training and Visit Committee, Er. Divesh Bharti, Member, Industrial Training and Visit Committee, and Dr. Archana Thakur.

Guided by RCF Demonstrator Mr. Shashank Kataria, the students toured main sections of the factory, including the Fabrication Shop, Shell Assembly Shop, Bogie Shop, Furnishing Shop, and Finishing Shop. The visit offered a unique opportunity to observe advanced manufacturing techniques and gain insights into large-scale industrial operations.

This successful industrial visit was made possible through the invaluable support of Prof. Mani Kant Paswan, Director, SLIET, Prof. A. S. Shahi, Dean (Academics), and Prof. Shankar Singh, HOD (Mechanical Engineering). The Department of Mechanical Engineering also extends heartfelt gratitude to the RCF administration for permitting the industrial visit to our students.

This enriching experience effectively bridged the gap between classroom learning and its practical applications, inspiring the future engineers of SLIET and equipping them with a deeper understanding of the challenges and intricacies of industrial manufacturing.

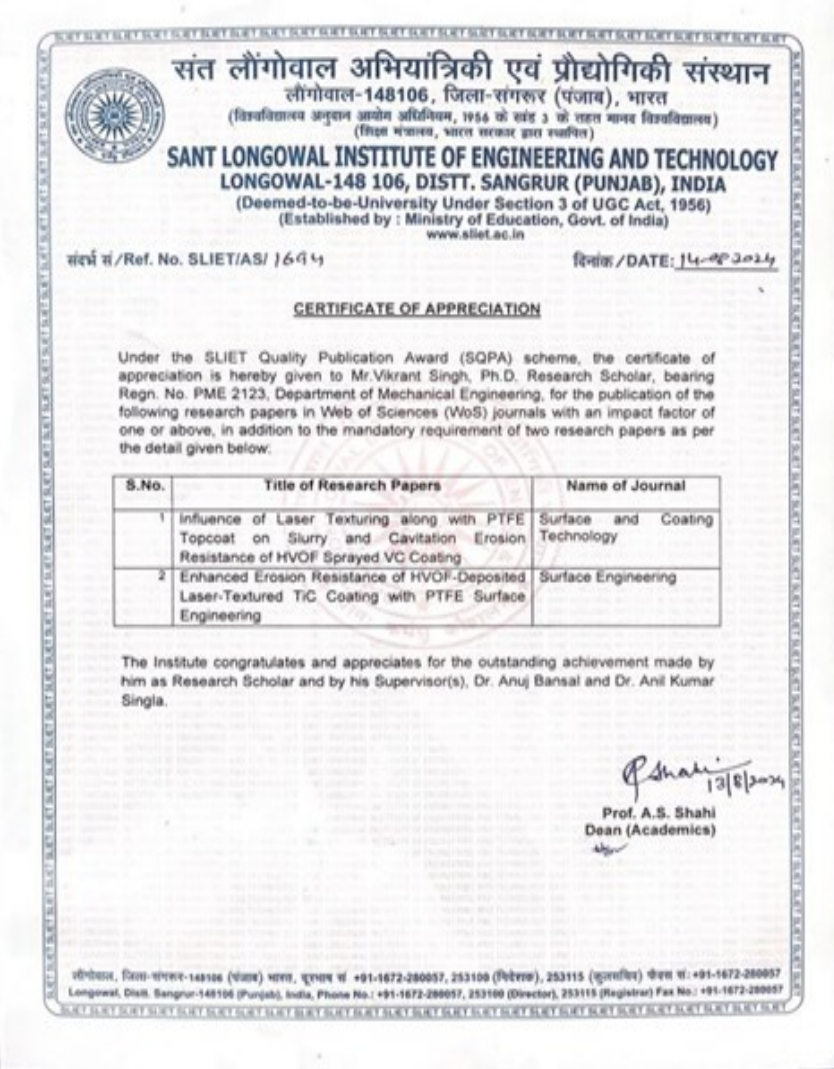
"Engineering is the closet thing to magic that exist in the world ." - Elon Musk

Standards Writing Competition

The Department of Mechanical Engineering, SLIET hosted the 'Standards Writing Competition' under the Aegis of *BIS (Bureau of Indian Standards)* on September 11th, 2024, for the students. Faculty Advisor Er. Divesh Bharti, AP (Mechanical) of 'Standards Club' of SLIET coordinated the event. The event aimed to increase awareness and understanding of standards among engineering students. The event was held in M-102 (Mechanical Block) under the guidance of Prof. Dr. Manikant Paswan (Director, SLIET). The event was graced by Prof. A.S. Dhaliwal (Dean- Student Welfare), Prof. A.S. Shahi (Dean Academics), Prof. Rajesh Kumar, Prof. R.K. Yadav and Prof. Shankar Singh, Head of Department-Mechanical. The registered students participated in the 'Standard Writing Competition', and the 'Standards' written by them were reviewed by Mr. Kushagra Jindal (Scientist-C, Deputy Director, BIS) and Mr. Saurabh Verma (Deputy Director, BIS).

Student Achievements

1. **Mr. Vikrant Singh** has been awarded the **SLIET Quality Publication Award (SQPA)** in recognition of his exceptional research contributions. Congratulations to the supervisors Dr. Anuj Bansal, Assistant Professor, and Dr. Anil Kumar Singla, Associate Professor, for their dedicated guidance and support throughout this research journey.



संत लौंगोवाल अभियांत्रिकी एवं प्रौद्योगिकी संस्थान
लौंगोवाल-148106, जिला-संगरूर (पंजाब), भारत
(विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 के खंड 3 के तहत मानद विश्वविद्यालय)
(शिक्षा मंत्रालय, भारत सरकार द्वारा स्थापित)

SANT LONGOWAL INSTITUTE OF ENGINEERING AND TECHNOLOGY
LONGOWAL-148 106, DISTT. SANGRUR (PUNJAB), INDIA
(Deemed-to-be-University Under Section 3 of UGC Act, 1956)
(Established by : Ministry of Education, Govt. of India)
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संदर्भ सं/Ref. No. SLIET/AS/ 1645 दिनांक/DATE: 14-08-2024

CERTIFICATE OF APPRECIATION

Under the SLIET Quality Publication Award (SQPA) scheme, the certificate of appreciation is hereby given to Mr.Vikrant Singh, Ph.D. Research Scholar, bearing Regn. No. PME 2123, Department of Mechanical Engineering, for the publication of the following research papers in Web of Sciences (WoS) journals with an impact factor of one or above, in addition to the mandatory requirement of two research papers as per the detail given below:

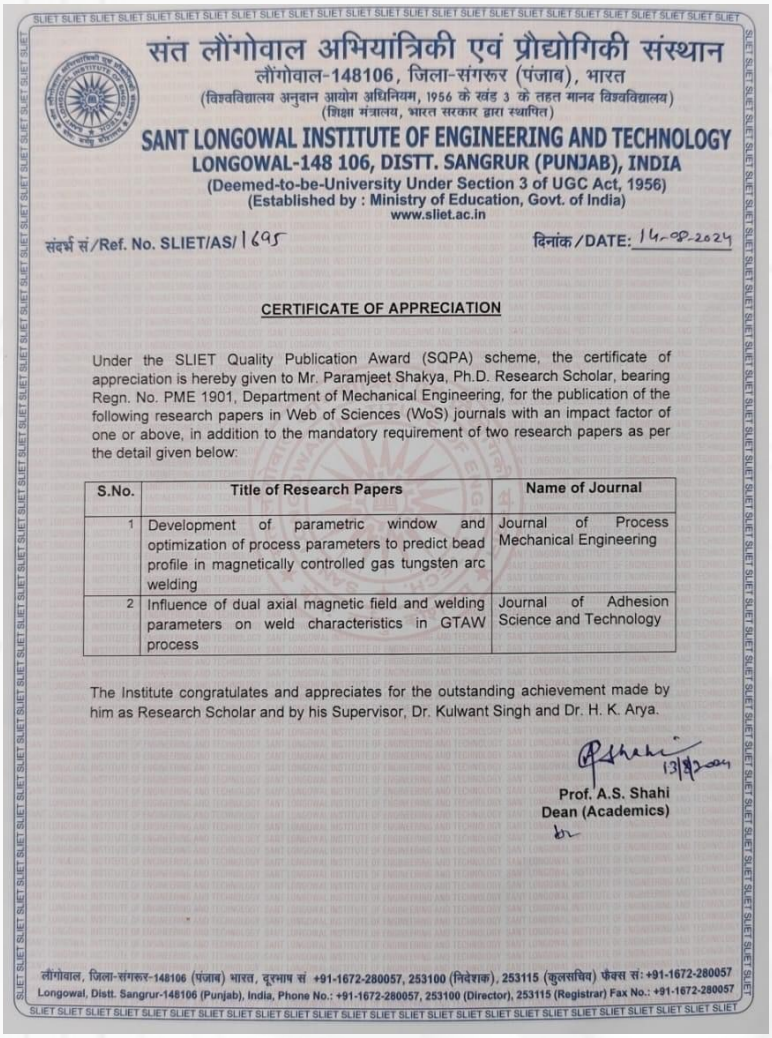
S.No.	Title of Research Papers	Name of Journal
1	Influence of Laser Texturing along with PTFE Topcoat on Slurry and Cavitation Erosion Resistance of HVOF Sprayed VC Coating	Surface and Coating Technology
2	Enhanced Erosion Resistance of HVOF-Deposited Laser-Textured TiC Coating with PTFE Surface Engineering	Surface Engineering

The Institute congratulates and appreciates for the outstanding achievement made by him as Research Scholar and by his Supervisor(s), Dr. Anuj Bansal and Dr. Anil Kumar Singla.

13/8/2024
Prof. A.S. Shahi
Dean (Academics)

लौंगोवाल, जिला-संगरूर-148106 (पंजाब) भारत, दूरभाष सं +91-1672-280057, 253100 (निदेशक), 253115 (कुलसचिव) फैक्स सं: +91-1672-280057
Longowal, Distt. Sangrur-148106 (Punjab), India, Phone No.: +91-1672-280057, 253100 (Director), 253115 (Registrar) Fax No.: +91-1672-280057

2. **Mr. Paramjeet Shakya** has been awarded the **SLIET Quality Publication Award (SQPA)** in recognition of his exceptional research contributions. Congratulations to the supervisors Dr. Kulwant Singh, Professor, and Dr. Harish Arya, Associate Profess or, for their dedicated guidance and support throughout this research journey.



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संदर्भ सं/Ref. No. SLIET/AS/1695 दिनांक/DATE: 14-08-2024

CERTIFICATE OF APPRECIATION

Under the SLIET Quality Publication Award (SQPA) scheme, the certificate of appreciation is hereby given to Mr. Paramjeet Shakya, Ph.D. Research Scholar, bearing Regn. No. PME 1901, Department of Mechanical Engineering, for the publication of the following research papers in Web of Sciences (WoS) journals with an impact factor of one or above, in addition to the mandatory requirement of two research papers as per the detail given below:

S.No.	Title of Research Papers	Name of Journal
1	Development of parametric window and optimization of process parameters to predict bead profile in magnetically controlled gas tungsten arc welding	Journal of Process Mechanical Engineering
2	Influence of dual axial magnetic field and welding parameters on weld characteristics in GTAW process	Journal of Adhesion Science and Technology

The Institute congratulates and appreciates for the outstanding achievement made by him as Research Scholar and by his Supervisor, Dr. Kulwant Singh and Dr. H. K. Arya.

13/8/2024
Prof. A.S. Shahi
Dean (Academics)

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Longowal, Distt. Sangrur-148106 (Punjab), India, Phone No.: +91-1672-280057, 253100 (Director), 253115 (Registrar) Fax No.: +91-1672-280057

PhD Defenses

1. **Mr. Vivek Gupta** defended his thesis on **June 28, 2024**, on *"Studies of Select Issues of Low Carbon Supply Chain Practices."* His research was supervised by **Prof. Kulwant Singh and Prof. Arvind Jayant**, and examined by **Dr. Dixit Garg, Professor, National Institute of Technology, Kurukshetra**.

2. **Mr. Gulvir Singh** successfully defended his thesis on **July 18, 2024**, titled *"Study of Effect of Process Parameters on Performance of Grooved Hot Rolling."* He was guided by **Dr. P. K. Singh**, and his work was examined by **Dr. D. Ravi Kumar, Professor at IIT Delhi**.

3. **Mr. Mahendra Kumar Jangid** defended his research on **October 24, 2024**, on *"Modeling and Simulation of a 3-Link Robotic Manipulator Applied for Casting in the Department of Mechanical Engineering."* His supervisors were **Dr. Jagtar Singh and Dr. Sunil Kumar**, and his thesis was examined by **Prof. Prerna Gaur, from the Instrumentation and Control and Electrical Engineering Department, NSUT Delhi**.

4. **Mr. Nitin Yadav** successfully defended his thesis on **November 06, 2024**, titled *"Study and Development of Piezoelectric Energy Harvester for Vibration of Mechanical Systems."* He was supervised by **Prof. Rajesh Kumar**, and his examiner was **Prof. Rajeev Kumar, from the Mechanical Engineering Department, IIT Mandi**.

5. **Mr. Vikrant Guleria** defended his thesis on **November 13, 2024**, on *"Modelling and Optimization of Surface Roughness Considering Vibration Along with Process Parameters in Turning."* He was guided by **Late (Prof.) P.K. Singh and Dr. Vivek Kumar**, and examined by **Prof. Sukhdeep Singh Dhami, from the Mechanical Engineering Department, NITTTR Chandigarh**.

M.Tech Defenses

1. **Mr. Sachin Jha** successfully defended his thesis on **June 19, 2024**, titled *"Microstructure, Wettability, Cavitation, and Corrosion Performance of Aluminum (AA6061) Coated with RF-Sputtered AlN Thin Film."* His research was supervised by **Prof. Jagtar Singh and Dr. Amit Bansal**, and examined by **Dr. Hari Singh, Professor at the National Institute of Technology, Kurukshetra**.

2. **Mr. Kappu Kamal** defended his thesis on **July 31, 2024**, on *"Studies on Rheological and Tribological Characteristics of Graphite Oxide and Copper Oxide Nanofluid."* He was guided by **Dr. Sunil Kumar and Dr. Surinder Kumar**, and his examiner was **Dr. Puneet Katyal, Associate Professor, Department of Mechanical Engineering, Guru Jambheshwar University of Science and Technology, Hisar**.

3. **Mr. Gautam Kunal** successfully defended his thesis on **August 06, 2024**, titled *"Metallurgical, Mechanical, and Simulation Studies on Friction Stir Welded AA6082 Joints."* He was supervised by **Dr. R. K. Saxena and Dr. A.S. Shahi**, and his work was examined by **Dr. Harmesh Kansal, Professor and Head of the Department of Mechanical Engineering, UIET, Panjab University, Chandigarh**.

Publications

1. Dahuja, A., Khatri, K., Kaur, R., Bansal, K. and **Singh, S**., 2024. Comparative outcomes of PFN vs PFNA2 nailing for osteoporotic unstable intertrochanteric fractures in the elderly. *Acta Ortopédica Mexicana*, *38*(5), pp.298-306.
2. Jimenez y Munoz, P., **Kumar, R**., He, C. and Lee, J., 2024. WRF-Chem simulations with and without the SMAP soil moisture retrievals and different levels of dust emissions.
3. **Kumar, S.,** Chauhan, S., Vashishtha, G., Kumar, S. and **Kumar, R.,** 2024. Fault Feature Extraction Using L-Kurtosis and Minimum Entropy-Based Signal Demodulation. *Applied Sciences*, *14*(18), p.8342.
4. Chauhan, S., Vashishtha, G., Zimroz, R., **Kumar, R.** and Gupta, M.K., 2024. Optimal filter design using mountain gazelle optimizer driven by novel sparsity index and its application to fault diagnosis. *Applied Acoustics*, *225*, p.110200.
5. Kumar, A., **Kumar, R.,** Xiang, J., Qiao, Z., Zhou, Y. and Shao, H., 2024. Digital twin-assisted AI framework based on domain adaptation for bearing defect diagnosis in the centrifugal pump. *Measurement*, p.115013.
6. Kumar, S., Singh, J., Kaur, H. and **Shahi, A.S.,** 2024. Cold Metal Transfer-Based Wire Arc Additively Manufactured Austenitic Stainless Steel/Inconel 625/Superduplex Stainless Steel Wall: Microstructural, Corrosion Properties, and Impact Toughness Evaluation. *Journal of Materials Engineering and Performance*, pp.1-14.
7. Gautam, B.P. and **Shahi, A.S.,** 2024. Multi-pass weld influence on metallurgical, tensile, impact toughness and fatigue crack growth behavior of gas tungsten arc welded Ti-6Al-4V joints. *Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications*, p.14644207241297199.
8. Khanna, N., Shah, P., **Singla, A.K., Bansal,** A., Makhesana, M.A. and Şirin, Ş., 2024. Comparison of VT-20 alloy drilling performance evaluation under dry, MQL, EMQL, and hybrid nanoparticle assisted EMQL ecological conditions. *Tribology International*, *199*, p.110025.
9. Singh, V., Kumar, A., Kaur, S., **Bansal, A. and Singla, A.K.,** 2024. Enhancing cavitation erosion resistance of VC+ TiC coatings with PTFE in marine environments via lasso regression optimization. *Tribology International*, *196*, p.109697.
10. Singh, V., **Bansal, A.,** Jindal, M., Sharma, P. and **Singla, A.K.,** 2024. Slurry erosion resistance, morphology, and machine learning modeling of plasma-sprayed Si3N4+ TiC+ VC and CrNi based ceramic coatings. *Ceramics International*.

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"Strive for perfection in everything you do, Take the best that exist and make it better. When it does not exist, design it." - Sir Henry Royce

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