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**St. JOSEPH'S COLLEGE OF ENGINEERING**

**(An Autonomous Institution)**

**St. JOSEPH'S GROUP OF INSTITUTIONS**

**OMR. CHENNAI - 119**

*Vol 8 Issue 1 Sept 2023*

# **Mech Buzz**

NEWSLETTER

**St. JOSEPH'S**  
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OMR. CHENNAI - 119



*The Choice of*  
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# OUR COLLEGE VISION AND MISSION



## VISION

To be a world class center for education, training and research by providing infrastructural facilities and competent faculty that unleashes technological innovations to serve the global society.

## MISSION

The mission of the department is to provide quality education to the aspiring students and to produce competent engineering to meet the challenges and help industry which in turn shall improve the quality of life of mankind.



## PROGRAMME EDUCATIONAL OBJECTIVES

Engineering graduates will be able to:

PEO1: Profession - Practice manufacturing engineering in a broad range of industries both core engineering and non-engineering fields such as medicine, space, law or business.

PEO2: Continuing Education - Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.

PEO3: Technophile - Conduct them in a responsible, professional, and ethical manner and attain professional maturity with deep understanding of the impact of the technological solutions in a societal and global context and a need for sustainable development.

PEO4: Service - Participate as leaders in their fields of expertise and in activities that support service and economic development nationally and throughout the world.

## PROGRAMME OUTCOMES

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Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. Design/development of solutions: Design solution for complex engineering problems and design systems components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.



Conduct investigations of complex problems: Use research- based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environmental and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development.

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**STUDENT**

# Achievements

- Abin Joe John, Anthony Glen, Anto Leo Binso, Dominic Sam Cardoza, Gurubalan N, Rajesh Krishna secured Top 100 Rank in mBAJA SAE INDIA 2023, conducted at SAE INDIA, on 20 February 2023.
- Rahul M, Sathishkumar V, Vignesh S, Thanigaivel G, Shanmugasundaram M, Varun Kumar V emerged as Winners in the Walkaround Workshop on Scorpio-N, conducted at Mahindra Research Valley, on 21 January 2023.
- Naveen Dsouza, Navinjith Ajith, Krithika V, Nakshathraa N J secured I / II Positions in Green Energy Club events, conducted at SJCE, on 08 March 2023.



## STUDENT **Achievements**

- A. Nivita Pandey, C. Chandru, B. Adithyan, S. Anthiya, S. Sarathi, Arockia Robinson, Chandrakishor, Aloysius Antony, Suman, Yuvaraj, JesuNicholas Filbert, Jerome, Balaji, RamSaiManasB, Haraharan
- secured I / II / III Positions in Design Challenge 2K23 (National Level) on 18 August 2023.
- • Muthukumars, Thamizselvan S, M V Sree Harish, V Subramaniyan secured III Position in Green Energy Club Events, conducted at SJCE, during July–August 2023.



## STUDENT Publications

- Vijayakumar S (Semester 8) published in Engineering Research Express, published by IOP Publishing, Volume 6, Issue 4, indexed in Scopus & ESCI, with an Impact Factor of 1.5, under Q2 Quartile.
- Monish N (Semester 7) published in Materials and Manufacturing Processes, published by Taylor & Francis, Volume 39, Issue 8, indexed in Scopus & SCIE, with an Impact Factor of 4.1, under Q1 Quartile.
- Monish N (Semester 7) published in Scientific Reports, published by Nature Publishing Group (UK), Volume 13, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 3.8, 6 citations, under Q1 Quartile.
- Monish N (Semester 7) published in Applied Energy, published by Elsevier, Volume 355, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 10.1, 13 citations, under Q1 Quartile.



## STAFF

# Publications

- N. Sathishkumar, N. Arunkumar, S.V. Rohith, and R. Rohit Hariharan published a Scopus-indexed article titled “Effect of varying unit cell size on energy absorption behaviour of additive manufactured TPMS PETG lattice structure” in Progress in Additive Manufacturing, Volume 8, Issue 6, pp. 1379–1391, in 2023.
- Gavaskar Thodda, Arun Kathapillai, Venkata Ramanan Madhavan, and Murugapoopathi Saravanamuthu reported an experimental analysis on the influence of compression ratio and injection parameters in acetylene–diesel dual fuel engines in the Scopus-indexed journal Environmental Science and Pollution Research, Volume 30, Issue 22, pp. 61217–61233, 2023.



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# Publications

- Arivazhagan S., Arun K., Gavaskar T., and Venkata Ramanan M. investigated the combined effect of green-synthesised nitrogen-doped carbon quantum dots blended biodiesel and acetylene gas in dual fuel engines, published in the Scopus-indexed journal *Energy*, Volume 275, Article 127296, 2023.
- Ganesh M., Arunkumar N.E., Arun Kumar N.E., and Sathish R. published research on surface grinding of Inconel 800 under distinct cooling conditions in *Materials and Manufacturing Processes*, Volume 38, Issue 14, pp. 1823–1836, 2023.
- N. Sathishkumar and G. Arumaikkannu published a Scopus-indexed study titled “Detonation spraying of a cermet coating to improve surface properties of tool steel parts produced by selective laser melting” in the *Journal of Thermal Spray Technology*, Volume 32, Issue 8, pp. 2439–2459, 2023.





# BIS

- Bureau of Indian Standards, Chennai Branch Office is organizing a program titled “Manak Manthan” which is envisaged to launch new standards and share important revisions / Amendments and wide circulation drafts to local manufacturers, Government departments, Chambers of Commerce, Industry Associations, PSU's or organizations who use such products, Regulatory bodies, Laboratories, Educational Institutions, Civil society groups.
- The objective of Activity: Engage actively in representing the campus BIS club and interact with BIS specialists, industrial professionals, and consumers to comprehend standards and provide unbiased views



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# TEAM

**Dr. N. E. ARUNKUMAR**

**Mr. T. BALASUBRAMANIAN**

**Mr. K. PRAVINKUMAR**

**ADITHYAA R**  
5<sup>TH</sup> SEMESTER

**HARIHARAN B**  
5<sup>TH</sup> SEMESTER

**ROSHAN SANTHOSH**  
3<sup>RD</sup> SEMESTER

**SRIKANTH U**  
3<sup>RD</sup> SEMESTER

**SARON R**  
3<sup>RD</sup> SEMESTER



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*Vol 8 Issue 2 Dec 2023*

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Student Achievements  
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## STUDENT

# Achievements

- Prakrithi Harith P and Tejaswin S were Finalists in the Smart India Hackathon 2023, conducted at National Level, on 11 November 2023.
- Sarath R secured II Position in Bug Off, conducted at Easwari Engineering College, Ramapuram, on 15 October 2022 (results published in 2023).
- D. Janakiraman, Kailash K, V. Janakiraman, R. Kathiravan, Justin I secured I Position in Idea Presentation, conducted by Robotics Club, SJCE, on 08 November 2023.



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**STUDENT**

# Publications

- Monish N (Semester 6) published in Fuel, published by Elsevier, Volume 350, Issue 15, indexed in Scopus & SCIE, with an Impact Factor of 6.7, 8 citations, under Q1 Quartile.
- Sai Ram B (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Sam Richard N (Semester 8) published multiple papers in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Eshwar N K (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.





**STAFF**

# Publications

- Kumar V. Ashok, Balaji T., and Arivazhagan S. conducted an experimental investigation on automobile radiators using carbon-based hybrid nanocoolants, published in the International Journal of Thermal Sciences during 2023.
- Gavaskar T., Venkata Ramanan M., Arun K., and Arivazhagan S. published a Scopus-indexed study on energy performance evaluation of alternative fuel-based dual fuel engines in the journal Energy, Volume 275, Article 127296, 2023.



## STAFF

# Publications

- Arivazhagan S., Arun K., Gavaskar T., and Venkata Ramanan M. investigated the combined effect of green-synthesised nitrogen-doped carbon quantum dots blended biodiesel and acetylene gas in dual fuel engines, published in the Scopus-indexed journal Energy, Volume 275, Article 127296, 2023.
- Ganesh M., Arunkumar N.E., Arun Kumar N.E., and Sathish R. published research on surface grinding of Inconel 800 under distinct cooling conditions in Materials and Manufacturing Processes, Volume 38, Issue 14, pp. 1823–1836, 2023.
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# BIS

Mr Karthikeyan K M B <karthikeyankmb@stjosephs.ac.in>

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**A Gentle Reminder : : Manak Manthan Programme on "Rubber Gasket for Pressure Cooker" as per IS 7466:2023**

1 message

**Chennai Branch Office I** <crbo1@bis.gov.in>

Thu, Mar 14, 2024 at 4:40 PM

To: drajkumar0415@gmail.com, info@echcentre.in, metwarestore@gmail.com, nsb@seymrubber.com, jaya@mitindia.edu, abraham@taylorrubber.com, sheka@mitindia.edu, quality@nandhinirubber.com, sr@alindiarubber.net, ASHESHKAPOOR@yahoo.co.in, kktaj@gmail.com, onerirubber@yahoo.co.in, ivaravind@yahoo.com, quality@delrubber.com, quality@delrubber@gmail.com, pd@delrubber@gmail.com, rpd@delrubberdesign@gmail.com, lab@delrubber.com, lab@delrubber@gmail.com, ganeshelesto@gmail.com, nammeerubber@gmail.com, karthikeyankmb@stjosephs.ac.in, mechod@ect.edu.in, sanarayanan8@gmail.com, kisimango36@gmail.com, granavelu\_ravi <granavelu\_ravi@yahoo.com>, elango@scorpusealings.com, svr234@gmail.com, scorpiprac@yahoo.in, pp@medifmail.com, Tony@oays.co, Kothurivanu@gmail.com, Siva@sjlogistics.com, Bfireserve@gmail.com, vinsharisharan@outlook.com, moneshkarna400@gmail.com, Kandukuri subhashini <Kandukuri.subhashini@gmail.com>, kssanthosh651@gmail.com, 2022me0626@evce.ac.in, mjanconsultant@gmail.com, Sathya next <Sathya.next@gmail.com>, pranavaadhithya74@gmail.com, info@metpot.in, dveenac54@gmail.com, ashrubberproducts@gmail.com, psanjayprakash2005@gmail.com, tnarmoury satya <tnarmoury.satya@gmail.com>, mmpolymers@gmail.com, rajuk@1956@gmail.com

**Bureau of Indian Standards**  
 Ministry of Consumer Affairs, Food and Public Distribution, Govt of India  
 Chennai Branch Office  
 Southern Regional Office

Dear Sir / Madam | கிம் மஹேதர் / மஹேதர்,

**Greetings from Bureau of Indian Standards (BIS)!**

**Thank you for expressing interest in our Manak Manthan Programme. Your registration has been confirmed.**

Bureau of Indian Standards (BIS), The National Standards Body of our country, is a statutory organization under the BIS Act, 2016, BIS gives utmost thrust for safeguarding and protecting the interests of consumer,

Bureau of Indian Standards, Chennai Branch Office is organizing a programme titled 'Manak Manthan' which is envisaged to launch new standards and share important revisions / Amendments and wide circulation drafts to local manufacturers, Government departments, Chambers of Commerce, Industry Associations, PSU's or organizations who use such products, Regulatory bodies, Laboratories, Educational Institutions, Civil society groups.

We are happy to inform you that Manak Manthan programme on "Indian Standard for Rubber Gasket for Pressure Cooker" as per IS 7466:2023 is being organized this month. As this is an important opportunity for all the stakeholders to know more about the Indian Standard available on the topic and have a discussion on the Indian Standard, you are requested to kindly make it convenient to attend the programme. The programme will be chaired by senior officials from Standardization department of BIS.

**Date & Venue of the Programme:-**

**Date:** 15th March 2024, Friday

**Time:** 9.30 am to 1.00 pm (with lunch)





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# BIS

Venue: Saveria Hotel, 146, Dr Radha Krishnan Salai, Mylapore, Chennai - 600004

Web invite, Indian Standard and a brief about the topic is enclosed herewith for your kind reference.

Kindly register yourself in the google form link given below to confirm your participation in the programme.

<https://forms.gle/99Juwq07qKGR7789A>

We are looking forward for your participation.

For further clarifications, kindly contact Smt. Madhushilini D (Graduate Engineer) +9144532886

With regards | अट्टर के साथ,

Shri.Jeevanandam D

Scientist-D/Joint Director

भारतीय मानक ब्यूरो | Bureau of Indian Standards  
उपभोक्ता मामलों, खाद्य और सार्वजनिक वितरण विभाग, भारत सरकार  
Ministry of Consumer Affairs, Food and Public Distribution, Govt of India  
बोर्ड कार्यालय | Chennai Branch Office  
दक्षिण क्षेत्रीय कार्यालय | Southern Regional Office  
वीआरडी कैम्पस, IV क्रॉस रोड, थारानमि, चेन्नई - 600113  
QT Campus, IV Cross Road, Tharamani, Chennai - 600113.

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  - Invite\_Manak Manthan\_IS 7466.pdf  
1581K





# TEAM

**Dr. N. E. ARUNKUMAR**

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**ADITHYAA R**  
5<sup>TH</sup> SEMESTER

**HARIHARAN B**  
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**ROSHAN SANTHOSH**  
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**SRIKANTH U**  
3<sup>RD</sup> SEMESTER

**SARON R**  
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*Vol 8 Issue 3 Mar 2024*

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**STUDENT**

# Achievements

- Abishek N, Harini J V, Joshua C, Jude Jefrin T, Kailash Kumar G, Kathir S, Naveen Bharathi M, Raphael Joshua A, Sanjai Sriram K, Sharan Shibi S, Ganapathi Raj M, Michael Jeremiah S, Raja Suresh K, Sakthi Maheswaran N, Srimen S, Subasriram R secured AIR-7 in mBAJA SAE INDIA 2024, conducted by SAE INDIA (National Level), on 13 January 2024.
- Michael Richard G secured II Position in Left, Right & Centre, conducted at IMPERIUM 2024, Madras Christian College, Tambaram, on 02 February 2024.
- Sharmila Maheshwaran N, Srimen S, Subasriram R secured AIR-7 in mBAJA SAE INDIA 2024, conducted at National Level, on 13 January 2024.



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**STUDENT**

# Achievements

- Ravindra Kumar B, Prakatheesh Arun K, Prakatheshwar D secured III Position in e-BAJA SAE INDIA 2024, conducted at National Level, on 09 March 2024.
- Sachin M, Sam Immanuel secured III Position in e-BAJA SAE INDIA 2024, conducted at National Level, on 09 March 2024.



## STUDENT Publications

- Cyril Moses L (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Bharath S (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Jebin Joel (Semester 7) published in Scientific Reports, published by Nature Publishing Group (UK), Volume 14, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 3.8, 9 citations, under Q1 Quartile.
- Madhusuthan A V (Semester 7) published in Scientific Reports, published by Nature Publishing Group (UK), Volume 14, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 3.8, 9 citations, under Q1 Quartile.



## STUDENT **Publications**

- Madhusuthan A V (Semester 8) published in Materials Today: Proceedings, published by Elsevier, Volume 23, Issue 4, indexed in Scopus, with an Impact Factor of 2.46, 2 citations, under Q2 Quartil



**STAFF**

# Publications

- Pravinkumar Kamatchi, Seshagiri Rao Vaddi, and Sathish Rengarajan published a Scopus-indexed research article titled “Inhibition study of curcumin extract’s effect on dissimilar aluminium joint” in the Journal of the Serbian Chemical Society, Volume 89, Issue 2, pp. 245–258, March 2024.
- G. Ashwin Prabhu, R. Selvam, and K.M. Kumar reported enhancements in the mechanical properties of basalt fiber and stainless-steel wire mesh composites using response surface methodology, published in the Scopus-indexed journal Fibers & Polymers, March 2024.



## STAFF

# Publications

- M. Diviya, J. Jebin Joel, M. Subramanian, T. Balasubramanian, A.V. Madhusuthan, N. Monish, and Nasim Hasan published a Scopus-indexed study on parametric investigation of W-EDM machining of AM60B biomaterial in Scientific Reports, Volume 14, Article 216, March 2024.
- N. Sathishkumar, S. Pranav, J. Navin Sales Michael, Niranjana Kulasekara Pandian, S.N. Jayanthan, Labib Mohammed Irshaad, S. Jagadeesh, X. Infant Keneth, Idris Ahamed, and R. Elakkiyadasan investigated the impact of heat treatment on the machinability behaviour of brass alloy 272, published in Materials Today: Proceedings, February 2024 (Scopus Indexed).



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**STAFF**

# Publications

- N. Sathishkumar and G. Arumaikkannu published a Scopus-indexed article on additive-manufactured hydroforming dies for thin metal bellow production in *Advances in Materials and Processing Technologies*, Volume 11, Issue 1, pp. 283–298, January 2024.
- G. Ashwin Prabhu, R. Selvam, and K.M. Kumar published further work on fibre-reinforced composite optimisation in *Fibers & Polymers* during 2024 (Scopus Indexed).
- Kumaresan Gladys, Ashok Alagesan, Praveen Kumar, Munisamy Raju, and Gurusamy Kasirajan published a Scopus-indexed article on luffa and Kevlar fibre-based sustainable thermoset biocomposites in the *Iranian Polymer Journal*, Volume 33, April 2024.





# BIS

The Department of Mechanical Engineering will host the BIS Conclave 2024, an event backed by the Bureau of Indian Standards (BIS), which serves as the National Standards Body of India. This initiative is further supported by the Department of Consumer Affairs, under the Ministry of Consumer Affairs, Government of India.



# BIS

Dr. Vaddi Seshagiri Rao, Principal, Dr. N. Arunkumar, Dean of IC&IQAC, and Dr. L. Balamurugan, Head of the Mechanical Department, inaugurated the event. The Standards Club of St. Joseph's College of Engineering's BIS Club Mentor, Mr. KMB. Karthikeyan, oversaw the event. Mr. K. Gnanasekaran, the fellow mentor, gave instructions to the students for the planned events. The valedictory function was presided over by Er G. Saravanan BE MBA M.Sc. (PMV) FIE FIV FIPE C Engg(I), Chief General Manager, ITCOT Limited, a Joint Venture of IFCI, SIPCOT, TIIC, SIDCO & Banks.



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# TEAM

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**Mr. T. BALASUBRAMANIAN**

**Mr. K. PRAVINKUMAR**

**ADITHYAA R**  
6<sup>TH</sup> SEMESTER

**HARIHARAN B**  
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4<sup>th</sup> SEMESTER

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*Vol 8 Issue 4 Jun 2024*

# **Mech Buzz**

NEWSLETTER





# OUR COLLEGE VISION AND MISSION



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# INDEX

Student Achievements  
Student Publications  
Staff Publications





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**STUDENT**

# Achievements

- Abishek N, Harini J V, Joshua C, Jude Jefrin T, Kailash Kumar G, Kathir S, Naveen Bharathi M, Raphael Joshua A, Sanjai Sriram K, Sharan Shibi S, Ganapathi Raj M, Michael Jeremiah S, Raja Suresh K, Sakthi Maheswaran N, Srimen S, Subasriram R secured AIR-7 in mBAJA SAE INDIA 2024, conducted by SAE INDIA (National Level), on 13 January 2024.
- Anirudh H, Dhanush S, Eshwar N K, Gopalan S, Praveen Raja D, Robin Wesley A, Shanmugasundaram M, Sivaganesan K, Sri Sivaprathishwaran R M, Suryaprakash M, Anish Hariharan J, Akash E, Anbarasan M, Balaji S, Baluchander P, Dinesh J T, Harini V J, Aravindh Kumar B, Prakatheesh Arun K, Prakatheshwar D, Sachin M, Sam Immanuel secured III Position in e-BAJA SAE INDIA 2024, conducted at National Level, on 09 March 2024.



## STUDENT

# Achievements

- Adithyaa R secured I Position in Project Spectra (SigmaZK24), conducted at Saveetha Institute of Medical and Technical Sciences, Thandalam, on 03 June 2024.
- Haripriyan B secured I Position in Techathon Quiz (SigmaZK24), conducted at Saveetha Institute of Medical and Technical Sciences, Thandalam, on 03 June 2024.



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**STUDENT**

# Publications

- Antony Leo F (Semester 8) published in Materials and Manufacturing Processes, published by Taylor & Francis, Volume 39, Issue 14, indexed in Scopus & SCIE, with an Impact Factor of 4.1, 1 citation, under Q1 Quartile.
- Antony Leo F (Semester 8) also published in Journal of Polymer and Composites, published by STM Journals, Volume 13, Issue 2, indexed in ESCI, with an Impact Factor of 6.005, under Q2 Quartile.
- Samrajith R (Semester 8) published in Materials and Manufacturing Processes, published by Taylor & Francis, Volume 40, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 4.1, 2 citations, under Q1 Quartile.
- Idris Ahamed (Semester 7) published in Materials Today: Proceedings, published by Elsevier, Volume 2024, Issue 0, indexed in Scopus, with an Impact Factor of 2.46, 1 citation, under Q2 Quartile.





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# STUDENT Publications

- Infant Keneth X (Semester 7) published in Materials Today: Proceedings, published by Elsevier, Volume 2024, Issue 0, indexed in Scopus, with an Impact Factor of 2.46, 1 citation, under Q2 Quartile.





## STAFF

# Publications

- Rathinam G.S.N., Ganesh Manickajothi, E.D.V. Ezhil, M. Sundaram, and Y. Devarajan published experimental research on friction surfacing of Alloy 36 in *Materialwissenschaft und Werkstofftechnik*, Volume 55, Issue 2, pp. 141–152, June 2024.
- Srinivasan D., Senthilkumar N., Ganesh M., and Perumal G. published characterisation studies on nano-aluminium composites in *Multiscale and Multidisciplinary Modeling Experiments and Design*, May 2024.
- M. Subramanian, R. Selvam, T. Balasubramanian, and A.V. Madhusuthan published optimisation studies on abrasive water-jet machining for fibre–metal hybrid composites in *Materials Today: Proceedings*, May 2024 (Scopus Indexed).



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- Kumaresan Gladys, Ashok Alagesan, Praveen Kumar, Munisamy Raju, and Gurusamy Kasirajan published a Scopus-indexed article on luffa and Kevlar fibre-based sustainable thermoset biocomposites in the Iranian Polymer Journal, Volume 33, April 2024.
- N. Sathishkumar, K.M. Kumar, R. Selvam, and A.S.M. Udayakumar optimised energy absorption and vibration behaviour of TPMS lattice structures, publishing their findings in the Scopus-indexed Journal of Elastomers & Plastics, Volume 56, Issue 5, May 2024.



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VOL 5 ISSUE 1

JUNE 2023- 2024

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SAE

# NEWSLETTER

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# SAE NEWSLETTER



## DRONE DESIGN CHALLENGE 2023

**Objective:** To nurture innovation and aero design skills among students, preparing them for India's emerging Uncrewed Aircraft System (UAS) market.

### Contest Structure:

#### 1. Phase 1 (Design and Technical Presentation):

- Teams present innovative designs virtually.
- Industry and academic experts evaluate designs.
- Top 20 teams proceed to Phase 2.

## 2. Phase 2 (Flight Test and Final Presentation):

- Build UAV prototypes.
  - Present technical details.
  - Conduct flight tests.
  - Prizes awarded to top 7 teams.
- Registration Guidelines:
    - o Registration Fee: ₹15,000 + 18% GST per team.
    - o Teams consist of 5 to 10 students from various disciplines, guided by a faculty advisor.
    - o Student membership in SAEINDIA is mandatory.





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# STUDENT CONVENTION 2024

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DEPARTMENT OF MECHANICAL ENGINEERING

**SAE INDIA**  
**STUDENT CONVENTION 2024**

**SAEINDIA** In Association with Institute Innovation Council (IIC) and IQAC

**AUTO QUIZ**

DATE: 26/10/2024

CAD Lab, St. Joseph's College of Engineering

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**Business Plan**

MECHANATICS LAB, St. Joseph's College of Engineering

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# BAJA SAE INDIA 2024

THE BAJA SAEINDIA COMPETITION IS AN EXCITING EVENT THAT CHALLENGES ENGINEERING STUDENTS TO

DESIGN, BUILD, TEST, AND VALIDATE SINGLE-SEATER ALL-TERRAIN VEHICLES (ATVS).

➤ PRELIMINARY ROUND (PHASE I):

- ❖ SCHEDULED IN JULY 2022.
- ❖ TEAMS PRESENT THEIR FINALIZED ATV DESIGNS AND IMPLEMENTATION PLANS VIRTUALLY.
- ❖ FOCUSES ON TECHNICAL AND PROFESSIONAL CAPACITY.
- ❖ CONDUCTED ONLINE.

➤ VIRTUAL BAJA SAEINDIA (PHASE 2):

- ❖ INCORPORATES BOTH VIRTUAL DYNAMIC EVENTS AND DIGITAL STATIC EVENTS.
- ❖ VIRTUAL STATIC EVENTS INCLUDE DESIGN, COST, AND SALES PRESENTATION EVALUATIONS.
- ❖ DYNAMIC EVENTS (E.G., MANEUVERABILITY, ALL TERRAIN PERFORMANCE) ARE HELD VIRTUALLY USING BENCHMARKED AUTOMOTIVE SIMULATION SOFTWARE (IPG CARMAKER).
- ❖ TESTS SOFTWARE KNOWLEDGE, DESIGN UNDERSTANDING, COST EFFICIENCY, AND BUSINESS SKILLS.

➤ PHYSICAL ROUND (PHASE 3):

- ❖ CONDUCTED PHYSICALLY FOR MBAJA (JANUARY) AND EBAJA (MARCH) IN 2023.
- ❖ EVALUATES BUGGIES IN EVENTS LIKE ACCELERATION, MANEUVERABILITY, SUSPENSION & TRACTION, AND ENDURANCE.
- ❖ INITIAL TECHNICAL EVALUATION ALSO TAKES PLACE

THE M-BAJA AND E-BAJA STUDENTS CLEARED THE PHASE 2 - VIRTUAL EVENT AND M-BAJA TEAM AURELIAN

RACING TEAM CLEARED IN TOP 100 TEAMS OUT OF 450 ALL OVER INDIA AND E-BAJA TEAM INFERNO RACING

TEAM CLEARED IN TOP 50 OUT OF 300 ALL OVER INDIA. BOTH THE TEAMS PARTICIPATED IN PHYSICAL EVENT

CONDUCTED IN PITHAMPUR FOR M-BAJA AND BANGLORE E-BAJA.





# BAJA SAE INDIA 2024





# BAJA SAE INDIA 2024

IN A RESOUNDING TESTAMENT TO DEDICATION AND EXCELLENCE, THE MBAJA (MINI BAJA) TEAM FROM OUR COLLEGE HAS ETCHED ITS NAME IN GLORY IN THE 2024 SEASON, SECURING AN IMPRESSIVE AIR (ALL INDIA RANK) 26 AND A COMMENDABLE STATE RANK OF 6. LED BY THE GUIDANCE OF MR. T. BALASUBRAMANIAN, OUR ESTEEMED FACULTY ADVISOR, THIS ACHIEVEMENT STANDS AS A BEACON OF INSPIRATION FOR OUR COLLEGE COMMUNITY.

FROM JANUARY 9TH TO 14TH, 2024, THE GROUNDS OF NATRAX, PITHAMPUR, WITNESSED A FIERCE COMPETITION WHERE OUR 24 MECHANICAL ENGINEERING STUDENTS SHOWCASED THEIR PROWESS IN AUTOMOTIVE ENGINEERING AND OFF-ROAD VEHICLE DESIGN. THE JOURNEY TO SUCCESS WAS MARKED BY A SERIES OF CHALLENGES, EACH CONQUERED WITH UNWAVERING DETERMINATION AND COLLABORATIVE SPIRIT.

THE STATIC EVENTS, INCLUDING THE DESIGN EVENT, SALES EVENT, AND COST EVENT, SERVED AS PLATFORMS FOR OUR TEAM TO DEMONSTRATE NOT ONLY THEIR ENGINEERING INGENUITY BUT ALSO THEIR MARKETING ACUMEN AND FINANCIAL PRUDENCE. THE INNOVATIVE DESIGNS AND STRATEGIC INSIGHTS PRESENTED BY OUR TEAM RESONATED WITH THE JUDGES, SETTING A BENCHMARK FOR EXCELLENCE.

NAVIGATING THE STRINGENT TECHNICAL INSPECTION (TI) PROCESS WITH FINESSE, OUR TEAM SHOWCASED METICULOUS ATTENTION TO DETAIL AND UNWAVERING COMMITMENT TO SAFETY STANDARDS. THIS PHASE UNDERSCORED OUR DEDICATION TO PRECISION ENGINEERING AND ADHERENCE TO REGULATIONS, SETTING A STRONG FOUNDATION FOR SUCCESS IN THE DYNAMIC EVENTS.





# NEWSLETTER

## EDITORIAL TEAM

### STAFF

MR. T. BALASUBRAMANIAN

DR. M. GANESH

### TEAM

SIVAGANESAN K -

8 TH

SEMESTER

ANIRUDHA H - 8 TH

SEMESTER

SANJAI SRIRAM K

- 6 TH SEMESTER

ABISHEK N -6 TH

SEMESTER





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**B I S**

**VOL 3, ISSUE 1 JUN 2024**

# **NEWSLETTER**

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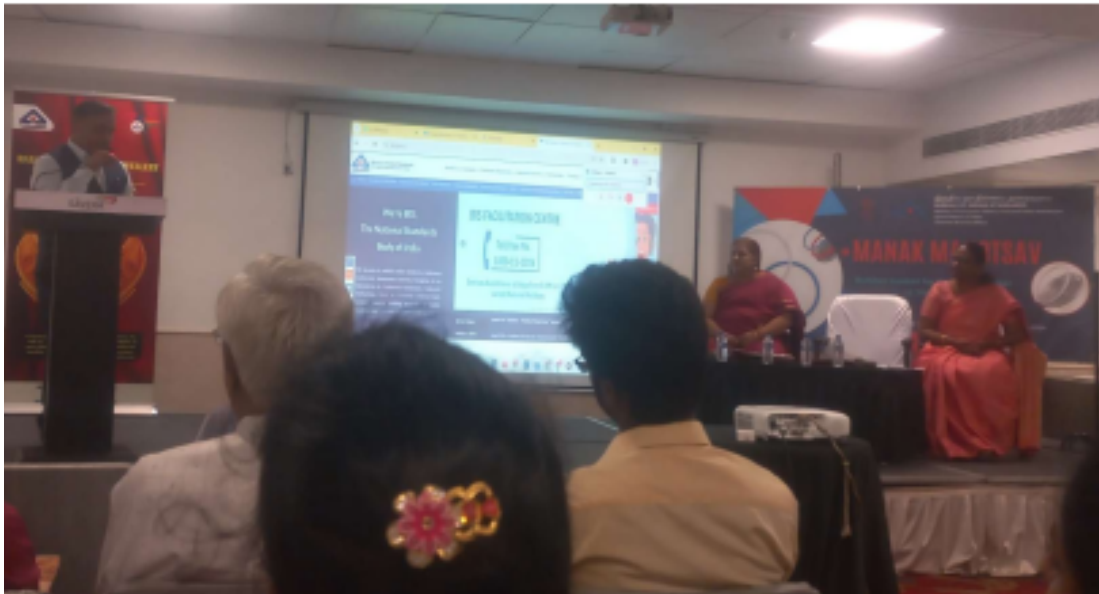
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OMR, CHENNAI - 119

B I S

VOL 3, ISSUE 1 JUN 2024

# NEWSLETTER



15<sup>th</sup> March, 2024

## MANAK MANTHAN

Bureau of Indian Standards, Chennai Branch Office is organizing a program titled “Manak Manthan” which is envisaged to launch new standards and share important revisions / Amendments and wide circulation drafts to local manufacturers, Government departments, Chambers of Commerce, Industry Associations, PSU’s or organizations who use such products, Regulatory bodies, Laboratories, Educational Institutions, Civil society groups.

### The objective of Activity:

- Engage actively in representing the campus BIS club and interact with BIS specialists, industrial professionals, and consumers to comprehend standards and provide unbiased views





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Mr Karthikeyan K M B <karthikeyankmb@stjosephs.ac.in>

## A Gentle Reminder : : Manak Manthan Programme on "Rubber Gasket for Pressure Cooker" as per IS 7466:2023

1 message

Chennai Branch Office | <cnbo1@bis.gov.in>

Thu, Mar 14, 2024 at 4:40 PM

To: drajkumar0415@gmail.com, info@techcentre.in, melawarstore@gmail.com, nsb@taylornrubber.com, jays@mitindia.edu, abraham@tajlornrubber.com, sheik@mitindia.edu, quality@nandhinrubber.com, sr@allindiarubber.net, ASHISHOKAPOOR@yahoo.co.in, kktal@gmail.com, orientrubber@yahoo.co.in, basavind@yahoo.com, quality deluxrubber <quality.deluxrubber@gmail.com>, pdeluxrubber@gmail.com, npdeluxrubberdesign@gmail.com, lab deluxrubber <lab.deluxrubber@gmail.com>, ganeshelasto@gmail.com, mammostrubber@gmail.com, karthikeyankmb@stjosephs.ac.in, mechod@act.edu.in, sananayanankb@gmail.com, kiwimango309@gmail.com, granavelu real <granavelu\_real@yahoo.com>, elingo@scopioselings.com, sur234@gmail.com, scorpopneo@yahoo.in, pap@rediffmail.com, Tony@oasys.co, Kothurivenu@gmail.com, Siva@spalogsitics.com, bhfnserve@gmail.com, vinishhartharani@outlook.com, moneshkanna400@gmail.com, Kandukur subhashini <Kandukur\_subhashini@gmail.com>, kasanthosh651@gmail.com, 2022me0626@evoc.ac.in, mjanconconsultants@gmail.com, Sathya next <Sathya.next@gmail.com>, pranavachithya74@gmail.com, info@merpol.in, dheenac4@gmail.com, asharubberproducts@gmail.com, psan@prakash2005@gmail.com, themoury sathy <themoury.sathy@gmail.com>, mmpolymers@gmail.com, rejuber1956@gmail.com

Bureau of Indian Standards  
Ministry of Consumer Affairs, Food and Public Distribution, Govt of India  
Chennai Branch Office  
Southern Regional Office

Dear Sir / Madam | கீழ்க் குறிப்பிட்ட / குறிப்பிட்ட,

Greetings from Bureau of Indian Standards (BIS)

Thank you for expressing interest in our Manak Manthan Programme. Your registration has been confirmed.

Bureau of Indian Standards (BIS), The National Standards Body of our country, is a statutory organization under the BIS Act, 2016, BIS gives utmost thrust for safeguarding and protecting the interests of consumer.

Bureau of Indian Standards, Chennai Branch Office is organizing a programme titled "Manak Manthan" which is envisaged to launch new standards and share important revisions / Amendments and wide circulation drafts to local manufacturers, Government departments, Chambers of Commerce, Industry Associations, PSU's or organizations who use such products, Regulatory bodies, Laboratories, Educational Institutions, Civil society groups.

We are happy to inform you that Manak Manthan programme on "Indian Standard for Rubber Gasket for Pressure Cooker" as per IS 7466:2023 is being organized this month. As this is an important opportunity for all the stakeholders to know more about the Indian Standard available on the topic and have a discussion on the Indian Standard, you are requested to kindly make it convenient to attend the programme. The programme will be chaired by senior officials from Standardization department of BIS.

Date & Venue of the Programme:-

Date: 15th March 2024, Friday

Time: 9:30 am to 1:00 pm (with lunch)

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Venue: Saveria Hotel, 146, Dr Radha Krishnan Salai, Mylapore, Chennai - 600004

Web invite, Indian Standard and a brief about the topic is enclosed herewith for your kind reference.

Kindly register yourself in the google form link given below to confirm your participation in the programme.

<https://forms.gle/99Juwq7qKQR7T8BA>

We are looking forward for your participation.

For further clarifications, kindly contact Smt. Medhushalee D (Graduate Engineer) - 9944532886

With regards | आदर के साथ,

**Shri.Jeevamandam D**

**Scientist-D/Joint Director**

भारतीय मानक ब्यूरो | Bureau of Indian Standards  
उपभोक्ता मामले, खाद्य और सार्वजनिक वितरण विभाग, भारत सरकार  
Ministry of Consumer Affairs, Food and Public Distribution, Govt of India  
चेन्नई प्रांतीय कार्यालय | Chennai Branch Office  
दक्षिण क्षेत्रीय कार्यालय | Southern Regional Office  
वीएनटी रोड, एन क्रॉस रोड, थानेर, चेन्नई - 600113

OT Campus, N Cross Road, Thaneer, Chennai-600113,

Save Paper & Environment. Please don't print this email unless you really need to. कृपया प्रिंट न करें और पर्यावरण को बचाएं। कृपया प्रिंट न करें जब तक कि आपको वास्तव में प्रकृत आवश्यकता न हो।

Follow us on:     

3 attachments

 IS 7466\_2023.pdf  
2429K

 Writup\_IS 7466\_Manak Manthan.pdf  
293K

 Invite\_Manak Manthan\_IS 7466.pdf  
1581K

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## BIS CONCLAVE 2024

The Department of Mechanical Engineering will host the BIS Conclave 2024, an event backed by the Bureau of Indian Standards (BIS), which serves as the National Standards Body of India. This initiative is further supported by the Department of Consumer Affairs, under the Ministry of Consumer Affairs, Government of India.

### ● Report

Dr. Vaddi Seshagiri Rao, Principal, Dr. N. Arunkumar, Dean of IC&IQAC, and Dr. L. Balamurugan, Head of the Mechanical Department, inaugurated the event. The Standards Club of St. Joseph's College of Engineering's BIS Club Mentor, Mr. KMB. Karthikeyan, oversaw the event.

Mr. K. Gnanasekaran, the fellow mentor, gave instructions to the students for the planned events. The valedictory function was presided over by Er G. Saravanan BE MBA M.Sc. (PMV) FIE FIV FIIPE C Engg(I), Chief General Manager, ITCOT Limited, a Joint Venture of IFCI, SIPCOT, TIIC, SIDCO & Banks.



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## BIS CONCLAVE (VALEDICTORY FUNCTION) CHIEF GUEST



MR G. SARAVANAN (BE, MBA, M.SC (PMV), FIE, FIV, FIPE C ENGG(I) )  
CHIEF GENERAL MANAGER

## CONCLAVE

The Department of Mechanical Engineering is organizing the BIS Conclave 2024, which is funded by the Bureau of Indian Standards (BIS), the National Standards Body of India, under the Department of Consumer Affairs, Ministry of Consumer Affairs, Government of India. An approved grant of INR 60,000 has been provided, with the registered club ID: SC-177, active since 2022. The conclave will be held on 14th October 2024 at the Periwinkle-Placement venue.



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**VOL 3, ISSUE 1 JUN 2024**

# **NEWSLETTER**

# **EDITORIAL**

# **TEAM**

**MR. K. M. B. KARTHIKEYAN**

**MR. K. GNANASEKARAN**

---

**RAHUL SENTHIL KUMAR**  
**MECH III - C**

**NARAYAN A**  
**MECH II - B**

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OCT 2023 - JUN 2024

VOL 1 ISSUE 1

# IIW NEWSLETTER

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# OUR COLLEGE VISION AND MISSION



## VISION

To be a world class center for education, training and research by providing infrastructural facilities and competent faculty that unleashes technological innovations to serve the global society.

## MISSION

The mission of the department is to provide quality education to the aspiring students and to produce competent engineering to meet the challenges and help industry which in turn shall improve the quality of life of mankind.

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## PROGRAMME EDUCATIONAL OBJECTIVES

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**Knowledge Knockout  
Fusion Fest  
Internal Tech Talk**

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## KNOWLEDGE KNOCKOUT



on



QUIZZ

**for IIV Chapter Members**

**"KNOWLEDGE KNOCKOUT"**  
**An Online Quiz Competition**

Welding is a fundamental skill in many engineering disciplines, particularly in mechanical and civil engineering. Understanding the principles of welding, including techniques, safety procedures, and material properties, is crucial for engineering students. Online quizzes are an effective tool to assess students' knowledge and provide instant feedback. This report evaluates an online welding quiz designed for engineering students, focusing on its structure, content, and effectiveness.

The online welding quiz conducted on June 29, 2024, comprised 50 multiple-choice questions divided into three sections: Basic Welding Concepts (20 questions), Welding Techniques and Equipment (15 questions), and Safety and Quality Control (15 questions). Student feedback highlighted the quiz's effectiveness in reinforcing classroom learning and practical sessions, with many appreciating the immediate feedback that helped identify knowledge gaps. However, some participants suggested adding more questions focused on advanced welding techniques and real-world applications, indicating an interest in deeper exploration of the subject. Overall, the quiz successfully assessed students' understanding and provided valuable insights for future improvements.



# FUSION FEST

The Fusion Fest seminar presentation, held on July 30, 2024, was a significant event aimed at enhancing participants' knowledge of various aspects of welding technology. The seminar featured a diverse range of topics, starting with an in-depth discussion on the different types of welding. Experts presented the characteristics and applications of methods such as MIG, TIG, and arc welding, providing attendees with a solid understanding of each technique's strengths and best use cases.

Safety was a key focus during the seminar, with a dedicated session on welding safety and health hazards. Presenters emphasized the importance of protective measures, including personal protective equipment (PPE) and proper ventilation. Participants learned about common risks associated with welding, such as exposure to harmful fumes and burns, underscoring the necessity for safety protocols in welding environments.

The seminar also delved into advanced welding techniques that are shaping the future of the industry. Experts showcased innovative practices and technologies that improve efficiency and quality, such as laser welding and friction stir welding. This segment provided attendees with insights into how these advanced methods can enhance productivity and meet the demands of modern manufacturing.

Overall, Fusion Fest provided an enriching platform for students, faculty, and industry experts to engage in meaningful discussions and share knowledge. The collaborative atmosphere fostered connections among participants and enhanced their understanding of welding technology, setting a strong foundation for future educational initiatives in the field.

Welding defects and inspections were thoroughly examined in the final segment of the seminar. Participants learned to identify common defects such as cracks, porosity, and undercutting. Presenters discussed various inspection methods, including visual inspection and non-destructive testing techniques, equipping attendees with the skills to ensure quality control in welded structures.

### Topics

1. Types of Welding
2. Welding Safety and Health Hazards
3. Advanced Welding Techniques
4. Welding Defects and Inspections

**IIV INDIA**  
**St. Joseph's College of Engineering**

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**PROUDLY PRESENTS**

**FUSION FEST**

**SEMINAR TOPICS**

- Types of welding
- Welding Safety and Health Hazards
- Advanced Welding Techniques
- Welding Defects and Inspection Techniques

**Guidelines**

- Maximum two per team.
- Presentation 8 to 15 slides.
- Presentation duration 10 minutes per team.

30 July, 2024  
 Venue: Mechatronics Lab

SCAN ME TO REGISTER





# INTERNAL TECH TALK

**Speaker:** Mr. M. Siva

**Date:** 06.02.2025

**Venue:** Robotics and Industrial Automation, Centre for Innovation

**Organized by:** Indian Institute of Welding Students' Chapter

The session was presided by Dr. N. Arunkumar, Dean IQAC and Industrial Collaboration and Dr. L. Balamurugan, Head, Department of Mechanical Engineering. The programme started with welcome address followed by inclusion of new members to the society. Dr.N.Arunkumar Sir emphasized the importance of welding in the industry and the role of IIW to the new members.

Dr. L. Balamurugan Sir appreciated the speaker with handing a token of appreciation. An internal tech talk was conducted on Tungsten Inert Gas (TIG) Welding, featuring an insightful session by Speaker. The session aimed to educate attendees about the fundamental principles, industrial applications, and advantages of TIG welding over other welding techniques. With its high precision, clean welds, and ability to work with a variety of metals, TIG welding is an essential process in industries requiring high-quality fabrication. The talk provided a blend of theoretical concepts ensuring that participants gained understanding of TIG welding techniques, equipment, and safety measures.



The Internal Tech Talk on TIG Welding proved to be an informative and engaging session, helping participants understand the concepts of this advanced welding process. Speaker's expertise, enhanced the learning experience for all attendees. The knowledge sharing session was attended by department staff members as well. The session concluded with a vote of thanks, expressing gratitude to Mr. M. Siva for sharing his knowledge on TIG welding. The participants left with a deeper understanding of TIG welding techniques, its applications.





# INTERNAL TECH TALK



**Chapter Chairman:**

Mr. P. Premkumar & Mr. Ruskin Bruce A. (Staff members who coordinate)

**Chapter Secretary:**

Mr. Sree Harrish M. V. (student member chiefly executes the activities)

**Chapter Treasurer:**

Mr. Gurumoorthi M. S. (student member who manages the fund)

**Chapter Executive Committee (EC) Members:**

(Student members team who join with Chairman, Secretary, Treasurer to plan the events, frame it to get approval and execution of various chapter activities)

- 1.Ms. Nivedha S.
- 2.Mr. Jeriel Samuel J.
- 3.Mr. Subasriram R.



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## EDITORIAL TEAM

**Mr. A. RUSKIN BRUCE**

**Mr. P. PREMKUMAR**

**PIOUS SUNIL R – 8<sup>TH</sup> SEMESTER**

**SREE HARISH M V – 6<sup>TH</sup> SEMESTER**

**NARAYAN A – 4<sup>TH</sup> SEMESTER**

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JUNE 2024 | VOL. 5 ISS 1

# ISHRAE NEWSLETTER

The Official Newsletter of ISHRAE

**St. JOSEPH'S**  
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# OUR COLLEGE VISION AND MISSION



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**Installation Ceremony**  
**Guest Speakers**  
**Elected Memebbers**  
**ISHRAE HVAC**





JUNE 2024 | VOL. 5 ISS 1

# ISHRAE NEWSLETTER

The Official Newsletter of ISHRAE



## ISHRAE STUDENT CHAPTER INSTALLATION CEREMONY

The Department of Mechanical Engineering at St. Joseph's College of Engineering, OMR, Chennai, organized the ISHRAE Student Chapter Installation Ceremony on 30th September 2024. The event, held between 8:00 AM and 9:30 AM at the Placement Block, marked the formal inauguration of the ISHRAE Student Chapter for the new academic year.

The Indian Society of Heating, Refrigerating, and Air Conditioning Engineers (ISHRAE) is a professional organization dedicated to promoting the HVAC&R industry in India.





## GUEST SPEAKERS

The installation ceremony was honored by the presence of two distinguished guest speakers

- **MR. ASHOK SUBRAMANIAM**

President of ISHRAE Chennai Chapter

Managing Director of Sun Rise Eco Systems

Mr. Ashok Subramaniam, a respected leader in the HVAC&R industry, graced the occasion as the chief guest. As the President of the ISHRAE Chennai Chapter, he has been instrumental in promoting industry-academia collaborations and fostering innovation within the chapter. He shared his vision for the future of ISHRAE and encouraged students to make the most of the opportunities offered by the organization.



## GUEST SPEAKERS

The installation ceremony was honored by the presence of two distinguished guest speakers

- **MR. T. GOGHULNATH**

Chair of Student Activities, ISHRAE Chennai Chapter  
Manager South, ZedBee Technologies (IIT Madras  
Research Park Incubated)

Mr. T. Goghulnath, an influential figure in student engagement activities, addressed the students with valuable insights into how they can leverage ISHRAE's resources to develop their skills. He spoke about emerging technologies in the HVAC&R sector, particularly the contributions of ZedBee Technologies in the realm of energy-efficient buildings and smart solutions.

## ELECTED MEMBERS

The following students were elected to key positions in the ISHRAE Student Chapter Working Committee for the academic year 2024-25 in presence of dean of industrial collaboration Dr N Arunkumar and HOD of mechanical engineering Dr Balamurugan.

**President:** Hariharan B. (21ME125)

**Vice-President:** Adithyaa R. (21ME217)

**Secretary:** Gokul Saravana Prabhu (21ME124)

**Joint Secretary:** Akshay VR. (21ME234)

**President Elect:** Jai Akash Lal (22ME242)

**Treasurer:** Narayan A. (22ME704)

**III Year Coordinator:** Josan A. (22ME109), Gokul R. (22ME120)

**II Year Coordinator:** Sushil P. (23ME104), Srikanth B. (23ME219)

**The Staff Coordinator:** Mr. K. Muninathan, M.E., (Ph.D.), continues to provide guidance and support to the students in their responsibilities and chapter activities.



## ISHRAE HVAC IN DATA CENTER SEMINAR

Our students from 3rd year and final years of our department are accompanied by **Dr.T Gavaskar, M.E.,Ph.d** attended a half day seminar conducted by **ISHRAE Chennai Chapter** on the topic **HVAC IN DATA CENTER** , held at **ISHRAE Chennai Chapter Head Quarters , Porur , Chennai** on **14/09/2024** .





# TEAM

**Dr. T. GAVASKAR**  
**Mr. V. ASHOK KUMAR**

**AKSHAY V R (III YEAR) –**  
**6<sup>TH</sup> SEMESTER**  
**JAI AKASH LAL (II YEAR) –**  
**4<sup>TH</sup> SEMESTER**



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*Vol 26 Issue 1 Jun 2024*

# Jet Spark

MAGAZINE

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# OUR COLLEGE VISION AND MISSION



## VISION

To be a world class center for education, training and research by providing infrastructural facilities and competent faculty that unleashes technological innovations to serve the global society.

## MISSION

The mission of the department is to provide quality education to the aspiring students and to produce competent engineering to meet the challenges and help industry which in turn shall improve the quality of life of mankind.



## PROGRAMME EDUCATIONAL OBJECTIVES

Engineering graduates will be able to:

PEO1: Profession - Practice manufacturing engineering in a broad range of industries both core engineering and non-engineering fields such as medicine, space, law or business.

PEO2: Continuing Education - Pursue advanced education, research and development, and other creative and innovative efforts in science, engineering, and technology, as well as other professional careers.

PEO3: Technophile - Conduct them in a responsible, professional, and ethical manner and attain professional maturity with deep understanding of the impact of the technological solutions in a societal and global context and a need for sustainable development.

PEO4: Service - Participate as leaders in their fields of expertise and in activities that support service and economic development nationally and throughout the world.

## PROGRAMME OUTCOMES

Engineering graduates will be able to:

Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences. Design/development of solutions: Design solution for complex engineering problems and design systems components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.



Conduct investigations of complex problems: Use research- based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Environmental and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development.

Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Life-Long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## PROGRAMME SPECIFIC OUTCOMES

---

PSO 1: The students graduating in Manufacturing Engineering will have profound foundation in mathematical, scientific and engineering domains necessary to achieve professional and productive excellence in technical and non-technical problem solving and analyzing engineering problems.

PSO 2: The students graduating in Manufacturing Engineering will have the ability to synthesize the engineering data and apply scientific principles for applications involving manufacturing engineering using high end CAD/CAM/CAE computational packages such as CATIA, ANSYS and MATLAB.

PSO 3: The students graduating in Manufacturing Engineering will have the ability to pursue advanced careers and discharge his/her duties entrusted with high degree of commitment to address professional and ethical responsibilities, including a respect for diversity and provide cost effective engineering solutions.



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Student Achievements  
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**STUDENT**

# Achievements

- Abishek N, Harini J V, Joshua C, Jude Jefrin T, Kailash Kumar G, Kathir S, Naveen Bharathi M, Raphael Joshua A, Sanjai Sriram K, Sharan Shibi S, Ganapathi Raj M, Michael Jeremiah S, Raja Suresh K, Sakthi Maheswaran N, Srimen S, Subasriram R secured AIR-7 in mBAJA SAE INDIA 2024, conducted by SAE INDIA (National Level), on 13 January 2024.
- Anirudh H, Dhanush S, Eshwar N K, Gopalan S, Praveen Raja D, Robin Wesley A, Shanmugasundaram M, Sivaganesan K, Sri Sivaprathishwaran R M, Suryaprakash M, Anish Hariharan J, Akash E, Anbarasan M, Balaji S, Baluchander P, Dinesh J T, Harini V J, Aravindh Kumar B, Prakatheesh Arun K, Prakatheshwar D, Sachin M, Sam Immanuel secured III Position in e-BAJA SAE INDIA 2024, conducted at National Level, on 09 March 2024.



## STUDENT

# Achievements

- Adithyaa R secured I Position in Project Spectra (SigmaZK24), conducted at Saveetha Institute of Medical and Technical Sciences, Thandalam, on 03 June 2024.
- Haripriyan B secured I Position in Techathon Quiz (SigmaZK24), conducted at Saveetha Institute of Medical and Technical Sciences, Thandalam, on 03 June 2024.
- Rajendhira Prasath S secured I Position in Technical Connexion (TRIDENT'24), conducted at Velammal Institute of Technology, Ponneri, on 04 June 2024.
- Shanmugapriyan R secured I Position in Technical Connexion (TRIDENT'24), conducted at Velammal Institute of Technology, Ponneri, on 04 June 2024.
- Suman S secured III Position in Technical Quiz (TRIDENT'25), conducted at Velammal Institute of Technology, Ponneri, on 04 June 2024.



## STUDENT

# Achievements

- Yuvaraj M secured III Position in Technical Quiz (TRIDENT'26), conducted at Velammal Institute of Technology, Ponneri, on 03 June 2024.
- Michael Richard G secured II Position in Left, Right & Centre, conducted at IMPERIUM 2024, Madras Christian College, Tambaram, on 02 February 2024.
- Aravindh C L secured I Position in Quiz Buzz, conducted at CONCERT 24, ACTECH, Chennai, on 02 July 2024.
- Abishek R B secured I Position in Quiz Buzz, conducted at CONCERT 24, ACTECH, Chennai, on 02 July 2024.
- Sujith Kumar D S secured III Position in e-BAJA SAE INDIA 2024, conducted at National Level, on 09 March 2024



## STUDENT **Achievements**

- Roshan Pradeep K secured I Position in Auto Quiz (Tier-2) at the SAE Student Convention 2024, conducted at IITDM Kancheepuram, on 10 October 2024.
- Abhith Xavier F secured I Position in Auto Quiz (Tier-2) at the SAE Student Convention 2024, conducted at IITDM Kancheepuram, on 10 October 2024.
- Dhanush Kumar S B secured I Position in Business Plan (Tier-2) at the SAE Student Convention 2024, conducted at IITDM Kancheepuram, on 10 October 2024.
- Kailash Kumar G secured I Position in Business Plan (Tier-2) at the SAE Student Convention 2024, conducted at IITDM Kancheepuram, on 10 October 2024.



## STUDENT Publications

- Vijayakumar S (Semester 8) published in Engineering Research Express, published by IOP Publishing, Volume 6, Issue 4, indexed in Scopus & ESCI, with an Impact Factor of 1.5, under Q2 Quartile.
- Monish N (Semester 7) published in Materials and Manufacturing Processes, published by Taylor & Francis, Volume 39, Issue 8, indexed in Scopus & SCIE, with an Impact Factor of 4.1, under Q1 Quartile.
- Monish N (Semester 7) published in Scientific Reports, published by Nature Publishing Group (UK), Volume 13, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 3.8, 6 citations, under Q1 Quartile.
- Monish N (Semester 7) published in Applied Energy, published by Elsevier, Volume 355, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 10.1, 13 citations, under Q1 Quartile.



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**STUDENT**

# Publications

- Monish N (Semester 6) published in Fuel, published by Elsevier, Volume 350, Issue 15, indexed in Scopus & SCIE, with an Impact Factor of 6.7, 8 citations, under Q1 Quartile.
- Sai Ram B (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Sam Richard N (Semester 8) published multiple papers in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Eshwar N K (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.



## STUDENT Publications

- Cyril Moses L (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Bharath S (Semester 8) published in IOP Conference Series: Materials Science and Engineering, published by IOP Publishing, Volume 1316, Issue 1, indexed in Scopus, with an Impact Factor of 0.50.
- Jebin Joel (Semester 7) published in Scientific Reports, published by Nature Publishing Group (UK), Volume 14, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 3.8, 9 citations, under Q1 Quartile.
- Madhusuthan A V (Semester 7) published in Scientific Reports, published by Nature Publishing Group (UK), Volume 14, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 3.8, 9 citations, under Q1 Quartile.



## STUDENT Publications

- Madhusuthan A V (Semester 8) published in Materials Today: Proceedings, published by Elsevier, Volume 23, Issue 4, indexed in Scopus, with an Impact Factor of 2.46, 2 citations, under Q2 Quartile.
- Antony Leo F (Semester 8) published in Materials and Manufacturing Processes, published by Taylor & Francis, Volume 39, Issue 14, indexed in Scopus & SCIE, with an Impact Factor of 4.1, 1 citation, under Q1 Quartile.
- Antony Leo F (Semester 8) also published in Journal of Polymer and Composites, published by STM Journals, Volume 13, Issue 2, indexed in ESCI, with an Impact Factor of 6.005, under Q2 Quartile.
- Samrajith R (Semester 8) published in Materials and Manufacturing Processes, published by Taylor & Francis, Volume 40, Issue 1, indexed in Scopus & SCIE, with an Impact Factor of 4.1, 2 citations, under Q1 Quartile.



## STUDENT Publications

- Idris Ahamed (Semester 7) published in Materials Today: Proceedings, published by Elsevier, Volume 2024, Issue 0, indexed in Scopus, with an Impact Factor of 2.46, 1 citation, under Q2 Quartile.
- Infant Keneth X (Semester 7) published in Materials Today: Proceedings, published by Elsevier, Volume 2024, Issue 0, indexed in Scopus, with an Impact Factor of 2.46, 1 citation, under Q2 Quartile.



## STUDENT Publications

- Idris Ahamed (Semester 7) published in Materials Today: Proceedings, published by Elsevier, Volume 2024, Issue 0, indexed in Scopus, with an Impact Factor of 2.46, 1 citation, under Q2 Quartile.
- Infant Keneth X (Semester 7) published in Materials Today: Proceedings, published by Elsevier, Volume 2024, Issue 0, indexed in Scopus, with an Impact Factor of 2.46, 1 citation, under Q2 Quartile.



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# Publications

- Pravinkumar Kamatchi, Seshagiri Rao Vaddi, and Sathish Rengarajan published a Scopus-indexed research article titled “Inhibition study of curcumin extract’s effect on dissimilar aluminium joint” in the Journal of the Serbian Chemical Society, Volume 89, Issue 2, pp. 245–258, March 2024.
- G. Ashwin Prabhu, R. Selvam, and K.M. Kumar reported enhancements in the mechanical properties of basalt fiber and stainless-steel wire mesh composites using response surface methodology, published in the Scopus-indexed journal Fibers & Polymers, March 2024.
- M. Diviya, J. Jebin Joel, M. Subramanian, T. Balasubramanian, A.V. Madhusuthan, N. Monish, and Nasim Hasan published a Scopus-indexed study on parametric investigation of W-EDM machining of AM60B biomaterial in Scientific Reports, Volume 14, Article 216, March 2024.





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# Publications

- N. Sathishkumar, S. Pranav, J. Navin Sales Michael, Niranjana Kulasekara Pandian, S.N. Jayanthan, Labib Mohammed Irshaad, S. Jagadeesh, X. Infant Keneth, Idris Ahamed, and R. Elakkiyadasan investigated the impact of heat treatment on the machinability behaviour of brass alloy 272, published in Materials Today: Proceedings, February 2024 (Scopus Indexed).
- N. Sathishkumar and G. Arumaikkannu published a Scopus-indexed article on additive-manufactured hydroforming dies for thin metal bellow production in Advances in Materials and Processing Technologies, Volume 11, Issue 1, pp. 283–298, January 2024.
- G. Ashwin Prabhu, R. Selvam, and K.M. Kumar published further work on fibre-reinforced composite optimisation in Fibers & Polymers during 2024 (Scopus Indexed).





## STAFF

# Publications

- G. Velmurugan, Jasgurpreet Singh Chohan, R. Sathish, Ramesh Velumayil, R. Ranjith Kumar, D. Elil Raja, M. Nagaraj, and A. John Presin Kumar published a study on hybrid composite materials under cryogenic conditions in the journal Silicon, June 2024.
- Sathish Rengarajan, A. Sathish Kumar, and R. Ashok Kumar published corrosion and inhibition studies on laser-welded stainless steel joints in the Bulletin of the Chemical Society of Ethiopia, Volume 38, Issue 3, April 2024.
- Rathinam G.S.N., Ganesh Manickajothi, E.D.V. Ezhil, M. Sundaram, and Y. Devarajan published experimental research on friction surfacing of Alloy 36 in Materialwissenschaft und Werkstofftechnik, Volume 55, Issue 2, pp. 141–152, June 2024.



## STAFF

# Publications

- Srinivasan D., Senthilkumar N., Ganesh M., and Perumal G. published characterisation studies on nano-aluminium composites in Multiscale and Multidisciplinary Modeling Experiments and Design, May 2024.
- M. Subramanian, R. Selvam, T. Balasubramanian, and A.V. Madhusuthan published optimisation studies on abrasive water-jet machining for fibre-metal hybrid composites in Materials Today: Proceedings, May 2024 (Scopus Indexed).
- Kumaresan Gladys, Ashok Alagesan, Praveen Kumar, Munisamy Raju, and Gurusamy Kasirajan published a Scopus-indexed article on luffa and Kevlar fibre-based sustainable thermoset biocomposites in the Iranian Polymer Journal, Volume 33, April 2024.



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# Publications

- N. Sathishkumar, K.M. Kumar, R. Selvam, and A.S.M. Udayakumar optimised energy absorption and vibration behaviour of TPMS lattice structures, publishing their findings in the Scopus-indexed Journal of Elastomers & Plastics, Volume 56, Issue 5, May 2024.
- K. Hariharan, N. Sathishkumar, and G. Arumaikkannu published a Scopus-indexed study on additive-manufactured polymer dies for hydroforming applications in Progress in Additive Manufacturing, Volume 10, Issue 1, April 2024.
- G. Arumaikkannu, N. Sathishkumar, and K. Hariharan published a Scopus-indexed article on direct rapid tooling for hydroforming using additively manufactured polymer dies in the International Journal on Interactive Design and Manufacturing, Volume 18, Issue 7, April 2024.



## STAFF

# Publications

- Arivazhagan S., Arun K., Gavaskar Thodda, and Venkata Ramanan M. investigated dual-fuel engine performance using biodiesel blends and published their work in the Scopus-indexed journal Energy, Volume 275, Article 127296, July 2024.
- Karthikeyan R., Madhu S., R. George Sahaya Nixon, and Krishnamoorthi S. published a review on jute fibre properties with DOI reference during 2024.
- Ganesh M., Arunkumar Natesan, Siva M., and Lionus Leo G.M. published a study on sustainable machining of Monel using vegetable-oil-based cutting fluids in Engineering Research Express, September 2024.
- Arunkumar Natesan and Ganesh M. published a Scopus-indexed article on cryogenic cooling in deep-hole drilling of Ti-6Al-4V in the Journal of Manufacturing Processes, Volume 121, pp. 343–360, July 2024.



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# Publications

- R. Selvam, M. Vignesh, R. Pugazhenth, G. Anbucheziyan, and M.S. Gupta published a Scopus-indexed study on wire-cut EDM parameter optimisation in the International Journal on Interactive Design and Manufacturing, Volume 18, Issue 5, July 2024.
- P. Sivamurugan, R. Selvam, M. Pandian, M.S. Ashraf, I.S. Chakrapani, A. Thanikasalam, P. Roshith, and B. Ramesh published a Scopus-indexed article on biosilica-reinforced epoxy biocomposites in Biomass Conversion and Biorefinery, Volume 14, Issue 13, July 2024.
- N. Sathishkumar, G. Arumaikkannu, N. Thangapandian, and E.A. Hem Anand published a Scopus-indexed study on cryogenic treatment of detonation spray-coated M2 high-speed steel in Materials and Manufacturing Processes, August 2024.





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# Publications

- M. Diviya, S. Kaliappan, L. Natrayan, and M. Subramanian published a Scopus-indexed article on multi-response optimisation of W-EDM of AM60B biomedical material in the Proceedings of the Institution of Mechanical Engineers, Part C, August 2024.
- K.M.B. Karthikeyan, Mohammed Saleh Al Ansari, Seeniappan Kaliappan, S. Yogeswari, Ramya Maranan, and Pawan Devidas Meshram published a study on aluminium metal-matrix composites in E3S Web of Conferences, Volume 556, August 2024.
- M. Ganesh, M. Siva, N. Arunkumar, and N. Sathishkumar published a Scopus-indexed article on micro-electrochemical machining optimisation in Engineering Research Express, August 2024.





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# Publications

- M. Diviya, A. Karmel, R. Utthirakumari, and M. Subramanian published a Scopus-indexed article on low-illumination image enhancement using deep learning models in Discover Computing, Volume 27, Issue 48, December 2024.
- Premkumar Paramasivam, Sathishkumar Natesan, Ruskin Bruce Antony Sebastian, and Sriiram Vijayakumar published a Scopus-indexed article on tribological effects in additive manufacturing of Inconel 718 in Engineering Research Express, November 2024.
- Gnanasekaran Ashwin Prabhu, Loganathan Balamurugan, and Pottalputhur Muthuswami Subramanian published a review on sustainable semi-active suspension systems in the Proceedings of the Institution of Mechanical Engineers, Part E, November 2024.



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# Publications

- N. Sathishkumar, N. Arunkumar, M. Subramanian, and R. Elakkiyadasan published a Scopus-indexed study on topology-optimised additive-manufactured punch holders in the International Journal on Interactive Design and Manufacturing, Volume 19, Issue 7, October 2024.



# BIS

Bureau of Indian Standards, Chennai Branch Office is organizing a program titled “Manak Manthan” which is envisaged to launch new standards and share important revisions / Amendments and wide circulation drafts to local manufacturers, Government departments, Chambers of Commerce, Industry Associations, PSU's or organizations who use such products, Regulatory bodies, Laboratories, Educational Institutions, Civil society groups.

The objective of Activity:

- Engage actively in representing the campus BIS club and interact with BIS specialists, industrial professionals, and consumers to comprehend standards and provide unbiased views



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# BIS

Mr Karthikeyan K M B <karthikeyankmb@stjosephs.ac.in>

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**A Gentle Reminder : : Manak Manthan Programme on "Rubber Gasket for Pressure Cooker" as per IS 7466:2023**  
1 message

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**Chennai Branch Office I** <cnbo1@bis.gov.in> Thu, Mar 14, 2024 at 4:40 PM  
To: drakumar0415@gmail.com, info@techcentre.in, metwarestore@gmail.com, nsb@taylormrubber.com, jaya@mitinda.edu, abraham@taylormrubber.com, shek@mitinda.edu, quality@mandhirrubber.com, sr@allindianrubber.net, ASHESHKAPPOOR@yaho.co.in, sxtab@gmail.com, orientrubber@yahoo.co.in, bsaravied@yahoo.com, quality.delanrubber <quality.delanrubber@gmail.com>, pdelanrubber@gmail.com, npddelanrubberdesign@gmail.com, lab.delanrubber <lab.delanrubber@gmail.com>, ganeshelasto@gmail.com, manmeetrubber@gmail.com, karthikeyankmb@stjosephs.ac.in, mechod@act.edu.in, ssnarayanan86@gmail.com, kiwimango369@gmail.com, granaveedu.navi <granaveedu\_navi@yahoo.com>, elango@scorpiosealings.com, svr234@gmail.com, scorpioseal@yahoo.in, psp@rediffmail.com, Tony@oasis.co, Kothuvenu@gmail.com, Siva@spjalogistics.com, bkfrserves@gmail.com, vimshishanaran@outlook.com, mimeshkarna400@gmail.com, Kanakurri subheshini <kanakurri.subheshini@gmail.com>, kasanthosh851@gmail.com, 2022m0624@jvcoe.ac.in, rajanconsultant@gmail.com, Sathya.nest <Sathya.nest@gmail.com>, granaveesh@ya74@gmail.com, info@meqpl.in, d@eemac54@gmail.com, asharubberproducts@gmail.com, psanjayprakash2005@gmail.com, trismoury.satya <trismoury.satya@gmail.com>, mmpolymers@gmail.com, rajak@1956@gmail.com

**Bureau of Indian Standards**  
Ministry of Consumer Affairs, Food and Public Distribution, Govt of India  
Chennai Branch Office  
Southern Regional Office

Dear Sir / Madam | வினியோக / ரிப்பன்,

**Greetings from Bureau of Indian Standards (BIS)!**

**Thank you for expressing interest in our Manak Manthan Programme. Your registration has been confirmed.**

Bureau of Indian Standards (BIS), The National Standards Body of our country, is a statutory organization under the BIS Act, 2016. BIS gives utmost thrust for safeguarding and protecting the interests of consumer.

Bureau of Indian Standards, Chennai Branch Office is organizing a programme titled "Manak Manthan" which is envisaged to launch new standards and share important revisions / Amendments and wide circulation drafts to local manufacturers, Government departments, Chambers of Commerce, Industry Associations, PSU's or organizations who use such products, Regulatory bodies, Laboratories, Educational Institutions, Civil society groups.

We are happy to inform you that Manak Manthan programme on "Indian Standard for Rubber Gasket for Pressure Cooker" as per IS 7466:2023 is being organized this month. As this is an important opportunity for all the stakeholders to know more about the Indian Standard available on the topic and have a discussion on the Indian Standard, you are requested to kindly make it convenient to attend the programme. The programme will be chaired by senior officials from Standardization department of BIS.

**Date & Venue of the Programme:-**

**Date:** 15th March 2024, Friday

**Time:** 9.30 am to 1.00 pm (with lunch)

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**Venue:** Savera Hotel, 146, Dr Radha Krishnan Salai, Mysapore, Chennai – 600004

Web invite, Indian Standard and a brief about the topic is enclosed hereafter for your kind reference.

Kindly register yourself in the google form link given below to confirm your participation in the programme.

<https://forms.gle/98Juwqb7qKGR7789A>

We are looking forward for your participation.

For further clarifications, kindly contact Smt. Madhushalini D (Graduate Engineer) • 9944532886

With regards | आदर के साथ,

**Smt. Jeevanandam D**

**Scientist-D/ Joint Director**

भारतीय मानक ब्यूरो | Bureau of Indian Standards  
उपभोक्ता मामलों, खाद्य और सार्वजनिक वितरण विभाग, भारत सरकार  
Ministry of Consumer Affairs, Food and Public Distribution, Govt of India  
वेब | वेबसाइट | Chennai Branch Office  
दक्षिण क्षेत्रीय कार्यालय | Southern Regional Office  
सी.एन.टी. कैंपस, IV क्रॉस रोड, थारामनी, चेन्नई - 600113  
CIT Campus, IV Cross Road, Tharamani, Chennai - 600113.

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Find us on:

3 attachments

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**Invite\_Manak Manthan\_IS 7466.pdf**  
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# BIS

The Department of Mechanical Engineering will host the BIS Conclave 2024, an event backed by the Bureau of Indian Standards (BIS), which serves as the National Standards Body of India. This initiative is further supported by the Department of Consumer Affairs, under the Ministry of Consumer Affairs, Government of India.





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# TEAM

**Dr . L . BALAMURUGAN**

**Mr K MUNINATHAN**

**ADITHYAA R**  
6<sup>TH</sup> SEMESTER

**HARIHARAN B**  
6<sup>TH</sup> SEMESTER

**ROSHAN SANTHOSH**  
4<sup>th</sup> SEMESTER

**SRIKANTH U**  
4<sup>th</sup> SEMESTER

**SARON R**  
4<sup>th</sup> SEMESTER