5th International Structural Integrity Conference and <u>Exhibition</u>

<u>22-24 October 2024</u>



SICE 202/





X

X

Organized by:

Visvesvaraya National Institute of Technology (VNIT), Nagpur

Indian Structural Integrity Society (InSIS)

Jawaharlal Nehru Aluminium Research Development & Design Centre (JNARDDC), Nagpur

www.sice2024.com

About the Conference

The Indian Structural Integrity Society (InSIS) unites researchers and practicing specialists across the spectrum to disseminate their research work, and collaborate in the broad area of structural integrity. After the inaugural edition in 2016, the 5th International Structural Integrity Conference and Exhibition (SICE) will be held at VNIT, Nagpur which is located in Central India.

The conference aims at taking this International convention to newer heights. SICE attracts engineers working in the academia, research organizations, and industries from India as well as abroad. The goal of SICE-2024 is to gather scholars across various disciplines all over the world to present and discuss advances in the field of **structural integrity** and to foster an environment conducive for exchanging ideas and information.

This edition of SICE will involve participation from streams like Mechanical, Metallurgical & Materials, Mining, Civil, and Chemical Engineering. This convention will also provide an ideal ambience to develop new collaborations and meet the experts and manufacturers in the field of structural integrity.

SICE 2024

SICE-2024 will definitely provide good platform for a fruitful interaction amongst academicians, researchers, practicing engineers, and industrial professionals.

We cordially invite you to participate and contribute to SICE-2024, at VNIT Nagpur.

SICE 2024 About the Host Institute/VNIT

Visvesvaraya National Institute of Technology (VNIT), Nagpur, named after the eminent engineer, planner, and statesman of the country Sir M. Visvesvaraya, is one of the thirty National Institutes of Technology (NITs) in the country. It has nine undergraduate, and eighteen postgraduate programs with a total student strength of 5000, which includes about 500 PhD scholars. A lush-green VNIT campus is sprawled over 214 acres, located centrally in the city of Nagpur, with a residential facility for about 3,500 students.

The present NIRF (National Institute Ranking Framework) ranking of VNIT is forty-one and is among the top five NITs in the country. Historically, this institute started as a Government Engineering College in 1956, was converted into a Regional Engineering College in 1960, and eventually got the status of National Institute of Technology (NIT) in 2002. Today, VNIT is an Institute of National importance and has ascended itself from a teaching-oriented campus to a blend of research and teaching. The institute has many R&D projects funded through Government and private agencies. Faculty, research scholars, and students are actively involved in the research funds, and many National and International events being arranged on the campus.

About InSIS

The Indian Structural Integrity Society (InSIS) unites professionals in a wide variety of disciplines that together impact the safety and reliability of structures, machines, vehicles, and devices.

International conferences, thematic workshops, and lectures organized by InSIS serve as a platform for researchers and practicing engineers to interact. InSIS periodically recognizes the contributions of outstanding academics and industry personnel through awards and sponsorship for their participation at professional meetings from India and overseas.

About JNARDDC

Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC), Nagpur, is a Central Government Autonomous Body under Ministry of Mines. This "Centre of Excellence" was set up in 1989 with a view to provide major R&D support system for an emerging modern aluminium industry in India.

JNARDDC has made key contributions in the areas of beneficiation, characterization, technological evaluation, upgradation of bauxites, Bayer process modeling, reduction of energy consumption and environmental pollution in smelter, development of alloys, product development, effective utilization of aluminium industry residue such as red mud, dross, spent pot lining and scrap for both primary and secondary industry.





About Nagpur

Nagpur is the third largest city and the winter capital of Maharashtra State. Nagpur lies precisely at the center of the country with the Zero Mile Marker indicating the geographical center of India. In the latest rankings of 100 developing smart cities given by the Union Ministry of Urban Development, Nagpur stood first in Maharashtra state and second in India. Nagpur Metro has entered the Guinness Book of World Records for being the longest double-decker viaduct metro measuring 3.14 km on Wardha Road. Also known as the "Orange City", Nagpur has officially become the greenest, safest, and one of the most technologically developed city in the Maharashtra state. It is the "Tiger Capital of India" as it connects many Tiger Reserves in India to the world. The city is well connected to all the major cities of the country by air and has also International connectivity. Nagpur is a major railway junction of North-South and East-West railway lines.



SICE 2024 Conference Themes

- Fatigue and fracture mechanics
- > Creep and creep-fatigue interaction
- High strain rate loading
- Small specimen testing
- Fretting and multi-axial fatigue
- Fracture mechanics-based design
- Computational mechanics
- Micromechanics of fracture and damage
- Steel and concrete structures
- Composites
- Bio and nanomaterials
- Structural materials
- > Weldments
- NDE and structural health monitoring
- Failure analysis
- > Reliability and structural integrity assessment
- > Fitness for service and remaining life assessment
- > Leak-before-break (LBB) analysis
- Regulatory aspects
- Life of nuclear structures
- Aerospace and automobile applications
- Offshore and marine structures
- Surface Engineering in Structural Integrity
- Transmission, Electrical Power
- Additive Manufacturing
- ... and other relevant areas.



Patrons

Madabhushi Madan Gopal (Chairman, BoG, VNIT, Nagpur, India) Datta Guru (IISc Bengaluru, Bengaluru, India) K. Bhanu Sankara Rao (IIT Hyderabad, Hyderabad, India) B. S. Murty (IIT Hyderabad, Hyderabad, India) Anupam Agnihotri (JNARDDC, Nagpur, India) Raghu Prakash (IIT Madras, Chennai, India) P. M. Padole (Director, VNIT, Nagpur, India)

International Advisory Board

P. M. Padole (Director, VNIT, Nagpur, India) Chairman
K. S. Ravi Chandran (University of Utah, USA)
Ashok Saxena (University of Arkansas, USA)
Vikram Jayaram (IISc Bengaluru, Bengaluru, India)
S. Gopalakrishnan (IISc, Bengaluru, India)
R. Balamuralikrishnan (DMRL, Hyderabad, India)
Komal Kapoor (NFC, Hyderabad, India)
Masahiro Endo (Fukuoka University, Japan)
K. Ravi-Chandar (The University of Texas at Austin, USA)
Leslie Banks-Sills (Tel Aviv University, Ramat Aviv, Israel)

National Advisory Board

D. R. Peshwe (VNIT, Nagpur) Chairman R. N. Singh (BARC, Mumbai) S. V. S. Narayana Murty (ISRO, Bengaluru) C. M. Manjunatha (NAL, Bengaluru) Krishnan Balasubramaniam (IIT Madras, Chennai) M. Kamaraj (IIT Madras, Chennai) **A. Nagesha** (IGCAR, Kalpakkam) G. V. Prasad Reddy (IGCAR, Kalpakkam) Krishna Jonnalagadda (IIT Bombay, Mumbai) Sumit Basu (IIT Kanpur, Kanpur) Rahul Mitra (IIT Kharagpur, Kharagpur) Naresh Varma Datla (IIT Delhi, Delhi) S. Sivaprasad (NML, Jamshedpur) **N. Narasaiah** (NIT, Warangal) Sanjib Kumar Acharyya (Jadavpur University, Jadavpur) S. R. Sathe (VNIT, Nagpur) **R. R. Yerpude** (VNIT, Nagpur) Y. B. Katpatal (VNIT, Nagpur) R. S. Sonparote (VNIT, Nagpur)



Convenors

Dilip R. Peshwe, Professor (HAG) & Head, MME, VNIT **Jatin G. Bhatt**, Professor, MME, VNIT

Secretaries

Atul R. Ballal, Professor, MME, VNIT Rajesh K. Khatirkar, Professor, MME, VNIT

Treasurer Manjusha M. Thawre, Associate Professor, MME, VNIT

Members

K. L. Wasewar, VNIT, Nagpur	D. H. Lataye, VNIT, Nagpur
R. D. Lokhande, VNIT, Nagpur	L. M. Gupta, VNIT, Nagpur
A. B. Andhare, VNIT, Nagpur	C. Ravi Kumar, VNIT, Nagpur
S. P. Wanjari, VNIT, Nagpur	A. Y. Vyavahare, VNIT, Nagpur
G. Tiwari, VNIT, Nagpur	A. P. Patil, VNIT, Nagpur
A. A. Likhite, VNIT, Nagpur	S. G. Sapate, VNIT, Nagpur
R. C. Rathod, VNIT, Nagpur	R. V. Taiwade, VNIT, Nagpur
Y. Y. Mahajan, VNIT, Nagpur	A. K. Srivastava, VNIT, Nagpur
A. B. Rathod, VNIT, Nagpur	C. A. Joshi, VNIT, Nagpur
A. V. Agasti, VNIT, Nagpur	S. R. Reddy, VNIT, Nagpur
Y. Madhavi, VNIT, Nagpur	Anil Kumar, VNIT, Nagpur
Abhinav Arya, VNIT, Nagpur	S. Tonpe, VNIT, Nagpur
S. Mehar, VNIT, Nagpur	N. Tandekar, VNIT, Nagpur
Shanker Kumar, VNIT, Nagpur	R. N. Chouhan, JNARDDC, Nagpur
K. Prasad, DMRL, Hyderabad	V. Chinthapenta, IIT, Hyderabad



AL INSTITUTE OF	SICE 2024 Sponsorship			
WAGPUR with diama	Platinum (INR 10 Lakhs + 18 % GST)	Diamond (INR 7.5 Lakhs + 18 % GST)		
	 Logo on souvenir, website, and information bulletin. One-page colour advertisement in the conference program. 1-page colour advertisement in the book of abstract (Back-page or Inner cover). 5 Conference registration coupons. 4 standard size stalls* at the venue. 1 premium marketing presentation slot of 15 min during the Conference. 1 marketing presentation slot of 12 min during any session. 5 minutes video display on the Conference website. Suite (1) in IIM guest house 	 Logo on souvenir, website, and information bulletin. 1-page colour advertisement in abstract book. (Inner cover). 3 Conference registration coupons. 3 standard-size stalls* at the venue. 2 marketing presentation slots of 12 min during any session. 3 Minutes video display on the Conference website. Suite (1) in IIM guest house 		
	Gold (INR 5 Lakhs + 18 % GST)	Silver (INR 4 Lakhs + 18 % GST)		
	Logo on souvenir, website, and information bulletin.	 Logo on souvenir, website, and information bulletin. 		
	 1-page colour advertisement in abstract book. (Inside) 2 Conference registration coupons. 2 standard size stall* at the venue. Suite (1) in IIM guest house 	 Half-page colour advertisement in the abstract book. (Inside) 1 Stall and 2 Conference registration coupons. Suite (1) in IIM guest house 		
	 1-page colour advertisement in abstract book. (Inside) 2 Conference registration coupons. 2 standard size stall* at the venue. 	 Half-page colour advertisement in the abstract book. (Inside) 1 Stall and 2 Conference registration coupons. Suite (1) in IIM guest house Stall Sizes *3m x 3m		
	 1-page colour advertisement in abstract book. (Inside) 2 Conference registration coupons. 2 standard size stall* at the venue. Suite (1) in IIM guest house 	 Half-page colour advertisement in the abstract book. (Inside) 1 Stall and 2 Conference registration coupons. Suite (1) in IIM guest house 		

X

X

7

www.sice2024.com

Pre-Conference Workshops

The workshop will be organized by the respective department's. A participant can register for any ONE of the following workshops. For more details and content of each workshop please visit www.sice2024.com

Title	Organizing Department
Mechanical Testing of Alloys and Composites	Metallurgical & Materials Engineering
Microstructural Characterization For Failure Analysis of Structural Components	Metallurgical & Materials Engineering
Corrosion Protection and Coatings	Chemical Engineering
Role of Rock Mechanics in Mining	Mining Engineering
Concrete Structure Forensic Engineering	Civil Engineering
Mathematical Modelling and Simulations of Mechanical and Structural Systems	Mechanical Engineering

Important Dates

Event	Date	
Abstract Submission Starts	15/01/2024	
Abstract Submission Ends	30/06/2024	
Manuscript Submission	15/07/2024	
Acceptance of Manuscript	31/07/2024	
Early Bird Registration Ends (Conference)	31/07/2024	
Pre-Conference Workshop Registration Starts	15/08/2024	
Pre-Conference Workshop Registration Ends	15/09/2024	
Conference dates : 22 nd to 24 th October 2024		





Registration

Participant- Conference	Before 1 st September, 2024	After 1 st September, 2024
Academica/R&D	Rs. 10000 + 1800 (GST)	Rs. 12000 + 2160 (GST)
Students (with valid ID card)	Rs. 4000 + 720 (GST)	Rs. 6000 + 1080 (GST)
Industry	Rs. 15000 + 2700 (GST)	Rs. 17000 + 3060 (GST)
Spouse	Rs. 5000 + 900 (GST)	Rs. 5000 + 900 (GST)
Foreign Delegates	US \$ 400	US \$ 450
Foreign Students (with valid ID card)	US \$ 200	US \$ 250
Workshop		
Participant – Workshop (Any One)	Rs. 4000 + 720 (GST)	Rs. 5000 + 900 (GST)

Discount in registration:

10% -InSIS Members

10% -in case 3 members from an organization participate together 20% -In case 5+ members from an organization participate together

Hostel Rooms for a limited number of delegates can be arranged on first cum first-serve basis based on availability and payment of extra charges.

For Hotels in nearby regions: Please visit the SICE 2024 website.

*Publication: Selected papers after peer-reviewing will be published in <u>Procedia Structural Integrity</u>.

Bank Details

Account Name: Indian Structural Integrity Society (InSIS) Account Number: 0000042361627959 IFS Code: SBIN0006702 MICR Code: 440002005 UPI ID: 42361627959insis@sbi SWIFT Code: SBININBB924

	SICE 2	024					
Excursions							
Jungle Safari Pench	Jungle S Tado		Rural Technology Centre				
80 kms from Nagpur	150 kms from Nagpur		Within 100 kms				
 Inclusions Transport Stay at Resort Tiger Safari 	 Inclusions Transport Stay at Resort Tiger Safari 		 Inclusions Transport Food Interaction 				
Excursion Charges							
Tour		Cost					
Jungle Safari			Rs. 8,000				
Rural Technology		Rs. 1,000					
Booking shall be confirmed by 1 st October 2024 by payment of required charges							
<image/>							

https://anandwan.in/ https://www.tadobanationalpark.in/





Organized by:

Visvesvaraya National Institute of Technology (VNIT), Nagpur

Indian Structural Integrity Society (InSIS)

Jawaharlal Nehru Aluminium Research Development & Design Centre (JNARDDC), Nagpur

Visvesvaraya National Institute of Technology, Nagpur South Ambazari Road, Nagpur – 440010 Maharashtra (India) sice2024@vnit.ac.in | Ph: +91-712-280-1385/1513/1508/1509