Chinmaya Vishwa Vidyapeeth
Deemed to be University

7th International Conference on Recent Advances in Composite Materials (ICRACM – 2024)

Organised by

Institute of Science and Technology (IST)
Chinmaya Vishwa Vidyapeeth
(Deemed to be University)

Venue : Lalitha Vidya Pratishthanam (LVP), Onakkoor, Ernakulam



Pre-Announcement

Message

From the desk of Founder President & Chairman of ICRACM Conference Series

As the Founding President and Chairman of the International Conference on Recent Advances in Composite Materials (ICRACM) series, I extend my sincere gratitude to all participants who have demonstrated a profound interest in the conference's theme. The primary goal of the ICRACM series is to facilitate collaboration among academicians and researchers from diverse disciplines worldwide, foster knowledge exchange, and promote industrial applications of composite materials. The success of each edition of the International Conferences on Recent Advances in Composite Materials (ICRACM) is a testament to worldwide participation and recognition. These conferences have been hosted in diverse locations: ICRACM-2004 at BHU, Varanasi, India; ICRACM-2007 at India Habitat Centre, New Delhi, India; ICRACM-2010 at Limoges University, Limoges, France; ICRACM-2013 at the International Centre, Goa, India; ICRACM-2016 at KL University, Vijayawada, Guntur, AP; and ICRACM-2019 was organized at BHU, Varanasi, India.

Gratitude is extended to friends who participated in previous conferences, sharing their knowledge and experiences with the global research community. The organizing committee acknowledges the financial support from AOARD-AFOSR, Tokyo, Japan, ONR, Singapore, and the President of the European Ceramic Society, further facilitating the ICRACM Series of Conferences and promoting interaction among composite researchers worldwide.

I am delighted to announce that the Seventh Series of ICRACM will occur at Chinmaya Vishwa Vidyapeeth University, Onakkoor, Kochi, Kerala, under the supervision of Prof. Sudheer Babu, Principal of the Institute of Technology at Chinmaya Vishwa Vidyapeeth Deemed to be University, Onakkoor, Kochi, Kerala, from December 12–14, 2024. Your continued support is invaluable as we anticipate another successful conference.

Prof. Vijay Kumar Srivastava
Founder President ICRACM Series
Professor of Mechanical Engineering,
Institute of Science and Technology,
Chinmaya Vishwa Vidyapeeth (Deemed to be University),
Kochi, Kerala

About the Conference

Composite materials offer unique advantages over monolithic materials, such as high strength, high stiffness, long fatigue life, low density, and adaptability to the intended function of the structure. Significantly, achievements have been made in the design, development, and applications of these materials. Considerable innovative research is ongoing for the development of continuous fibre composites and particulate composites for critical applications. Structural requirements underline the emerging need for sustainable and reliable composite material performance in diverse applications.

Hence, ICRACM-2024 aims to bring together academicians and researchers from various disciplines to share knowledge and exchange views, fostering useful industrial applications of composite materials. The conference will facilitate discussions on the latest trends in the entire spectrum of composite materials. The conference will also discuss the role of Indian Knowledge Systems (IKS) in the development of composite materials, providing sustainable and holistic approaches to modern engineering, and blending tradition with innovation.

These deliberations will undoubtedly assist researchers in exploring newer aspects of the design and development of various types of composite materials.

About the Institute

Chinmaya Vishwa Vidyapeeth (CVV) is a deemed to be university under the 'de novo' category recognised by the University Grants Commission (UGC). The university was established in 2016 by the Chinmaya Mission, a worldwide organisation founded by Swami Chinmayananda, and is located in Ernakulam, Kerala, India. Institute of Science and Technology, launched in June 2023, is a new venture of the university to transform technical education in the country. Set on a sprawling 70+-acre campus in Onakkoor, Ernakulam, CVV IST marks a significant milestone in the state's educational journey. The CVVs Lalitha Vidya Pratishthanam (LVP) Onakkoor facility is located just 35 km from Ernakulam Junction Station and 50 km from Kochi Airport. At CVV, we hold a deep commitment to the advancement of knowledge and the promotion of scholarly endeavours. We believe that conferences provide a unique platform for academia, researchers, and experts from diverse fields to come together, exchange ideas, and inspire innovation. Our institution has consistently strived to foster an environment that encourages intellectual growth and collaboration.

At CVV IST, we are diligently equipping ourselves to deliver an outstanding academic experience. CVV IST offers a diverse array of technical programs approved by the All India Council for Technical Education (AICTE). These programs include B.Tech. programs in Computer Science, Data Sciences, Artificial Intelligence and Machine Learning, Electronics Engineering, and Mechanical Engineering. Our educators are from esteemed national institutions as well as renowned universities worldwide. CVV IST is distinguished not only for its academic offerings but also for its holistic approach to education. We introduce students to Indian Knowledge Systems (IKS) and offer opportunities for self-discovery through yoga and meditation.



Conference Topics

The conference will broadly cover the following topics under different themes:

Material-Specific composites

- Polymer composites
- Wood composites
- Metal matrix composites
- Ceramic composites and advanced ceramics

Modern Engineered Materials

- Nanomaterials and Nano-composites
- Biomaterials and Bio-composites
- Surface Engineering of Composite Materials
- Smart Materials

Engineering and Applications

- Recent developments in fiber and particulate composites for structural and tribological applications (Fracture, Fatigue, Impact, Wear, and friction, Environmental studies)
- Composites in intelligent and sustainable civil structure
- Application of composites in low-cost houses and bridges
- Composite Technology – Industrial Applications
- Composite materials for electronic applications

Manufacturing and quality testing of composites

- Recycling & repair technology in composites
- Critical issues in composites (Interfaces, processing applications, and manufacturing)
- Testing and Quality control of composites

Machine Learning (ML) and Artificial Intelligence (AI) in composite materials

- Composite materials and their damage detection using AI techniques
- Artificial Intelligence in Predicting Mechanical Properties of Composite Materials
- Applications of ML to composite materials modelling and design

Indian Knowledge Systems in composites

- Composite Materials in Traditional Indian Architecture
- Role of IKS in promoting Sustainable Practices in Composite Manufacturing

Call for papers

Original research contributions are invited from Scientists, Academicians, Research Scholars, students and Practicing Engineers in the areas mentioned under Conference Topics for technical sessions. Authors are invited to send abstracts (one page) form to the convener as per the template given. The abstract will be peer reviewed and authors will be informed about the acceptance of the paper. We strongly encourage the submission of abstracts by e-mail to conference email

Important dates (Deadlines)

- Submission of Abstract: 20 February 2024
- Abstract Acceptance Notification: 20 July 2024
- Submission of full paper: 20 August 2024

Manuscript preparation

Manuscripts should be in camera-ready form and should not exceed six typed pages. Manuscripts (Full paper) should contain a short running title with the name of authors and their affiliations, a brief introduction, experimental, results and discussions, conclusions and references. Figures and tables are to be interposed in the text with captions. Authors are requested to prepare the manuscript in MS Word using the template provided on the conference webpage.

ICRACM Best Paper Awards:

The Best Paper Awards will be presented during the Valedictory function of the ICRACM conference to authors whose work represents ground-breaking research in their respective areas. By recognising these selected papers for their ingenuity and importance, ICRACM highlights some of the theoretical and practical innovations that are likely to shape the future of advances in composites. The Best Papers Award will be considered in the following areas:

(a) Ceramic and MMC Composites

(b) Nanocomposites and Bio composites

(c) Indian Knowledge Systems (IKS) in Composite Materials

Eligibility/Selection Process:

Conference papers submitted for review to the Journals' publication are all eligible for an award. These papers undergo a rigorous review process, with the final selections made by a composite review committee. The award winner is chosen by a committee appointed by the Chair of the Governing Board and is announced during the conference. The committee's decision is based on the following criteria:

- The soundness of the conceptual development.
- The level of originality and new contributions.
- The effective application of appropriate methodology.
- Relevance to management practices.
- The clear and effective communication of the central ideas in the work.

Proceedings and Journal Publications.

The E-proceedings of the abstracts of the accepted manuscripts will be shared with all the registered participants. Conference papers will be considered for publication in international journals after the delegates' presentations and peer review by subject matter experts. The best papers will undergo the publication review process according to the norms of Elsevier and Springer publishers for potential inclusion in journals such as Polymer Composites, Materials Today Proceedings, Composites-A (published by Elsevier, UK), and Nanotechnology Journals.



Registration Fee Details

(a) Before July 2024:

RESEARCHERS WORKING ABROAD

Foreign Delegate	USD 250
Foreign Delegate (Student)	USD 100

RESEARCHERS WORKING IN INDIA

Indian Delegate from Industry	₹ 5000
Indian Delegate from Academic & Research Institutes	₹ 4000
Research Scholar/ UG and PG students	₹ 2000

(Conference fee covers proceeding, tea, lunches and Banquet)

(b): After JULY 2024 till AUGUST 2024:

RESEARCHERS WORKING ABROAD

Foreign Delegate	USD 300
Foreign Delegate (Student)	USD 150

RESEARCHERS WORKING IN INDIA

Indian Delegate from Industry	₹ 6000
Indian Delegate from Academic & Research Institutes	₹ 5000
Research Scholar/ UG and PG students	₹ 2500

(Conference fee covers proceeding, tea, lunch and Banquet)

Sponsorships & Advertisements:

Sponsorship tariffs are given below:

Industries:	₹ 20,000.00
Academic Institutions:	₹ 10,000.00

An industrial sponsor can nominate four delegates and academic sponsor can nominate two delegates free of charge. Also, advertisements in souvenirs will be published at the cost of ₹ 25,000.00 (back full page), ₹ 20000.00 (inside full page) and ₹ 10000.00 (half page).

Payment Details

All payments related to Delegate Registration Fee, Sponsorship, Advertisements, Technical Exhibition and Manufacturer's Presentation are to be made through Bank Transfer to the following bank account:

Account name	Chinmaya Vishwavidyapeeth
Account no	50200027727252
IFS Code	HDFC0001519
Branch	Pepathy

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Vidyapeeth (Deemed to be University),
Kerala

Conference organising Committee

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Chinmaya Vishwa Vidyapeeth
(Deemed to be University), Kerala

Dr. K Girish Kumar, Dean – Research,
Chinmaya Vishwa Vidyapeeth
(Deemed to be University), Kerala

Chairman of ICRACM 2024

Dr. Sudheer Babu Yarlagadda, Principal,
CVV IST, Chinmaya Vishwa Vidyapeeth
(Deemed to be University), Kerala

Co-Chairman of ICRACM 2024

Prof. V. K. Srivastava, Professor, CVV IST,
Chinmaya Vishwa Vidyapeeth
(Deemed to be University), Kerala

Organising Secretary

Dr. Praveen K M, Associate Professor of
Mechanical Engineering, CVV IST,
Chinmaya Vishwa Vidyapeeth
(Deemed to be University), Kerala

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Uni. of Applied Sciences, Leipzip, Germany

Prof. Xungai Wang
IFM, Deakin University, Geelong, Australia.

Invited Speakers

- **Prof. Valter Carvelli**,
  Dept. of Archetcture and Building Engineering, Politecnico Milano, Italy
- **Prof Alessandro Pegoretti**,
  Dept. of mech. Engg, Trento University, Trento, Italy
- **Prof. Yuri Bazilevs**,
  Dept. Of Mechanical and Materials Engg, Broun University , Biston, USA
- **Prof. Jai Ramkumar**.
  Dept. Of Mech. Engg, IIT Kanpur
- **Prof. Bikramjit Basu**,
  The Materials Research Center, Indian Institute of Science, Bangalore
- **Prof. Dr.Ing. Till Quadflieg**,
  Institute of Hydrogen Energy, Aachen, Germany
- **Prof. Prasad Potluri**,
  Department of Materials, University of Manchester, UK
- **Prof. D. Bahadur**,
  Department of Metallurgical Engg, IIT, Mumbai
- **Prof. Adepu Kumar**,
  Department of Mechanical Engineering, National Institute of Warangal
- **Prof.Velmurugan Ramachandran**,
  Department of Aerospace Engineering, Indian Institute of Technology, Madras
- **Prof. B. Negeshwara Rao**,
  K.L. University, Vijayawada, AP

Venue of the Conference

Chinmaya Vishwa Vidyapeeth (Deemed to be University), Periyapuram P.O, Onakkoor South, Kochi-686667





About Kochi

Kochi, also known as Cochin, is one of the most picturesque destinations on the southwest coastline of Kerala. An all-weather harbour and a grand seascape mark it as the "Queen of the Arabian Sea". It is part of the district of Ernakulam in the state of Kerala and is often referred to as Ernakulam. Kochi is a place with deep roots in history and its streets exude an old-world charm; a place with beautiful monuments and a variety of linguistic and ethnic communities. The peaceful city is also one of the leading commercial centres of southern India. It is an emerging cosmopolitan city with bustling life in the streets, the cinema halls, the shopping malls, and the skyscrapers; the commercial capital of the state, with a style statement different from the rest of the state.

Accommodation

Delegates are encouraged to consider booking their accommodation either through a government-authorised travel agent or on their own in hotels located conveniently close to the conference venue. Please note that the organisers will be unable to offer accommodation arrangements during the conference period.

Contact Us

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Glimpses of previous editions of ICRACM Conference series

ICRACM 2004





ICRACM 2007





ICRACM 2010





ICRACM 2013





ICRACM 2016





ICRACM 2019



