



**13th International Conference on Recent Challenges in
Engineering and Technology (13th ICRCET – 2024)**

Organized by IFERP Academy

In association with

St. Joseph's College of Engineering, Chennai, India

Post Conference Report

13th ICRCET Contributed to Following SDGs



Foreword

Dear Participants,

It gives me great pleasure to share with you the outcomes and results of the 13th International Conference on Recent Challenges in Engineering and Technology (13th ICR CET - 2024), with the theme of "Engineering Excellence in the Face of Technological Challenges" which was held at Chennai, India on 27th and 28th September, 2024. More than 200 people attended the event in person, and more than 400 people watched the live stream online. We were able to actively engage and reach out to a wider spectrum of research communities.

The 13th International Conference on Recent Challenges in Engineering and Technology (13th ICR CET - 2024), provided a vibrant platform that brings together scholars, educators, and researchers from a variety of disciplines. It is a hub for exchanging innovative research about applied sciences, engineering and technology, business management and studies, education and technology that foster critical and creative thinking, mainly in the engineering, science and technology, and fostering multidisciplinary exchanges among experts in engineering & technology. We are grateful for the support of many universities and research institutes, whose contributions were vital to the success of this conference. We extend our sincere gratitude and highest respect to the professors who played an important role in the review process, providing valuable feedback and suggestions to authors to improve their work. We also extend our appreciation to the external reviewers for providing additional support in the review process and to the authors for contributing their research results to the 13th ICR CET – 2024.

Mr. Siddth Kumar Chhajjer

MD & Founder, IFERP

Technoarete Group



Mr. A. Siddth Kumar Chhajjer

MD & Founder, IFERP
Technoarete Group

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1. Conference Summary



Conference Name	: 13th International Conference on Recent Challenges in Engineering and Technology (13th ICRCET - 2024)
Date	: 27th & 28th September, 2024
Venue	: Chennai, India
Conference Theme	: Engineering Excellence in the Face of Technological Challenges
Organized By	: IFERP Academy and St.Joseph's College of Engineering, Chennai
No. of Organizing Committee Members	: 90
No. of Editors/Reviewers	: 84
No. of Speakers	: 18
No. of Abstracts Received	: 254
No. of Participants Registered	: 120
No. of Attendees	: 180

1.1 Conference Overview

13th International Conference on Recent Challenges in Engineering and Technology (13th ICR CET - 2024) was the place where ideas collided and innovations take the spotlight for the contribution towards achieving Sustainable Development Goals! 13th ICR CET – 2024 had long been the meeting place for professionals, educators, researchers, policymakers, and industry professionals looking to network, share ideas, and grow in their respective fields. At this engineering & technology conference in Chennai, India, professionals, academics, researchers, and educators were came together to share their groundbreaking research, and different views, and explore unique ideas from various fields.

Through collaboration, the conference explored intersections between various disciplines and created a dynamic environment to enhance educational discussions and explore diverse studies. This International Conference in Chennai, India was a part of shaping the future of global education. They continued to inspire, transform, and shape education together. Their participation was more than just an RSVP; it is an important role in our community dedicated to academic success and positive change.

1.2 Conference Theme

The theme of the 13th International Conference on Recent Challenges in Engineering and Technology (13th ICR CET - 2024) " Engineering Excellence in the Face of Technological Challenges " was to provide a lively space where different academic areas come together. 13th ICR CET – 2024 stands as a melting pot of ideas, where the boundaries between advances in recent challenges in engineering, and technology disciplines blur, giving rise to innovative solutions that address global challenges. The conference embraces the multidisciplinary nature of engineering excellence driving through digital transformation, recognizing that true breakthroughs often occur at the intersections of different fields.

This theme encapsulates the conference's focus on fostering innovation and collaboration across diverse disciplines within engineering, science and technology. It encourages participants to explore and present cutting-edge solutions that contribute to the sustainable development of industries, addressing challenges and advancing knowledge for a better future. The multidisciplinary perspective highlights the interconnectedness of various fields in creating holistic and impactful solutions.

1.3 Objectives & Scope of the Conference

The primary objective of the 13th International Conference on Recent Challenges in Engineering and Technology (13th ICRCET - 2024) is to foster a collaborative environment where innovation, research, and knowledge converge.

Key objectives include:

Knowledge Sharing: Facilitate the exchange of research findings, technical expertise, and innovative solutions across engineering disciplines.

Collaboration: Foster collaboration between academia and industry to tackle emerging technological challenges.

Innovation: Encourage innovative approaches and cutting-edge research that can contribute to solving contemporary issues in engineering and technology.

Global Networking: Provide a platform for global networking opportunities, enabling attendees to build professional relationships and partnerships.

13th International Conference on Recent Challenges in Engineering and Technology (13th ICRCET - 2024) transcends traditional boundaries, providing a platform for comprehensive exploration across a multitude of disciplines. The conference encompasses a wide scope that includes, but is not limited to:

- Advances in various branches of engineering
- Emerging technologies such as AI, IoT, and blockchain.
- Sustainable engineering practices and green technologies.
- Digital transformation in manufacturing and other sectors.
- Robotics, automation, and smart systems.
- Cybersecurity and information technology challenges.

2. Guest of Honor, Keynote Speakers, Session Speakers, Event Speakers & Session Chairs

Conference Chair



Dr. Vaddi Seshagiri Rao
M.E., M.B.A., Ph.D.,
Principal,
St. Joseph's College of Engineering.



Dr. A Tamizh Selvi
Professor
Dept of Information Technology, St. Joseph's
College of Engineering

Keynote Speakers



Prof Dr. Mohan L. Verma
Head Dept of Applied Physics
Shri Shankaracharya Technical
Campus Bhilai
India.



**Dr. Susarla Venkata Ananta
Rama Sastry**
Associate Dean Research &
Development and Faculty of
Chemical Engineering
Harcourt Butler Technical
University, Kanpur Harcourt
Butler Technical University,
Kanpur India.



**PROF. DR. PRIYA
MURUGESAN**
Associate Dean- Research
Faculty of Science &
Humanities, Saveetha
Engineering College,
Chennai.



Dr. S Sumathi
Professor Department of
Information Technology, St.
Joseph's College of
Engineering.



Prof. Dr. Saikumari V
Head & Professor
SRM Easwari Engineering
College
Chennai.



Dr. Kumar Rangasamy
Head Biomedical Engineering
department
Vivekanada College of Engineering for
Women
Chennai, India.



Dr. Thelma Domingo Palaoag
Professor
College of Information Technology and Computer
Science
University of the Cordilleras
Philippines.

Session Speakers



**Assoc Prof. Dr. Mohsin
Shaikh**
MIT World Peace University
India.



**Assoc Prof. Dr. Ankita
Chaturvedi**
The IIS University
India.



**Assoc Prof. Dr. Beauty
Pandey**
Woxsen University
India.



Prof. Dr. R. Rajaraman
Saveetha Engineering
College
Anna University
India.

Session Chairs



Dr. R. Selvam, M.E(PDD), Ph.D.,
Associate Professor,
Department of Mechanical Engineering,
Saveetha Engineering College
(Autonomous), Chennai, India.



DR.G.Immanuel, M.A., Ph.D
Assistant Professor,
Department of English, Science and
Humanities
Saveetha Engineering College
(Autonomous), Chennai, India.



Dr. N. Bhalaji
Principal,
Rajalakshmi Institute of Technology,
Tamil Nadu.



Dr. Heltin Genitha C
Professor
Department of Information Technology
St. Joseph's College of Engineering
Chennai, Tamilnadu India.



Dr. Elavarasan R
Associate Professor
Department of Information Technology
St. Joseph's College of Engineering
Chennai, Tamilnadu India.



Dr. VERA KARLA S. CAINGLES
Associate Professor V
University of Science and Technology
of Southern Philippines

Exclusive Event Speaker

Title : Personalization & Customization and VR to Enhance Classroom Pedagogy



Ts Dr Goh Wei Wei
Associate Professor
Head of Department School of Computer Science
Deputy Director for Digital Health and Medical Advancement Impact Lab
School of Computer Science
Faculty of Innovation and Technology
Taylor's University

3. Welcoming & Introduction

Welcome to the 13th International Conference on Recent Challenges in Engineering and Technology (13th ICRCET - 2024), where we gather the brightest minds and the most innovative ideas to inspire, educate, and connect. Before we dive into today's agenda, let's take a moment to appreciate the vibrant atmosphere here at Chennai, India. This location has been thoughtfully chosen to provide an inspiring environment for our discussions and networking. The theme of 13th ICRCET – 2024 is “ Engineering Excellence in the Face of Technological Challenges “. Our objective is to explore new technologies in engineering & technology, discuss emerging trends, foster collaboration, etc. Over the next two days, we have a packed schedule with six sessions, one workshops and eighteen keynote presentations from industry leaders and experts. This conference would not be possible without the hard work and dedication of many individuals. We would like to extend a special thank you to our conference managers, and organizing committee members.

4. Welcome Speeches

4.1 Welcome Speech by Conference Secretary - Dr. A Tamizh Selvi



Dr. A Tamizh Selvi

Professor

Dept of Information Technology, St. Joseph's
College of Engineering _____

4.2 Welcome Speech by Conference Chair - Dr. Vaddi Seshagiri Rao



Dr. Vaddi Seshagiri Rao
M.E.,M.B.A., Ph.D.,
Principal,
St. Joseph's College of Engineering.

5. Keynote Speeches

5.1 Speech by Keynote speaker - Dr. Priya Murugesan



**PROF. DR. PRIYA
MURUGESAN**
Associate Dean- Research
Faculty of Science &
Humanities, Saveetha
Engineering College,
Chennai.

5.2 Speech by Keynote speaker - Dr. Saikumari V



Prof. Dr. Saikumari V
Head & Professor
SRM Easwari Engineering
College
Chennai.

5.3 Speech by Keynote speaker - Dr. S Sumathi



Dr. S Sumathi
Professor Department of
Information Technology, St.
Joseph's College of
Engineering.

5.4 Speech by Keynote speaker - Dr. Kumar Rangasamy



Dr. Kumar Rangasamy
Head Biomedical Engineering
department
Vivekananda College of Engineering for
Women
Chennai, India.

5.5 Speech by Keynote speaker - Dr. Thelma Domingo Palaoag



Dr. Thelma Domingo Palaoag
Professor
College of Information Technology and Computer
Science
University of the Cordilleras
Philippines.

5.6 Speech by Keynote speaker - Prof Dr. Mohan L Verma



Prof Dr. Mohan L Verma
Head Dept of Applied Physics
Shri Shankaracharya Technical
Campus Bhilai
India.

5.7 Speech by Keynote speaker - Dr. Susarla Venkata Ananta Rama Sastry



**Dr. Susarla Venkata Ananta
Rama Sastry**
Associate Dean Research &
Development and Faculty of
Chemical Engineering
Harcourt Butler Technical
University, Kanpur Harcourt
Butler Technical University,
Kanpur India.

5.8 Speech by Keynote speaker - Assoc Prof. Dr. Ankita Chaturvedi



**Assoc Prof. Dr. Ankita
Chaturvedi**
The IIS University
India.

**6. Workshop on Personalization & Customization and VR to Enhance
Classroom Pedagogy**

Title : Personalization & Customization and VR to Enhance Classroom Pedagogy



Ts Dr Goh Wei Wei
Associate Professor
Head of Department School of Computer Science
Deputy Director for Digital Health and Medical Advancement Impact Lab
School of Computer Science
Faculty of Innovation and Technology
Taylor's University

7. Group Photo



8. Inaugural Programme

The inaugural program of the 13th International Conference on Recent Challenges in Engineering and Technology (13th ICR CET - 2024), Chennai, India on 26th & 27th September, 2024 conference sets the tone for the entire event, providing an opportunity to introduce the theme, objectives, and key participants. The inaugural program included inaugural addresses, proceedings release, Momento ceremony & Institutional Membership Benefits etc. The inaugural program was a crucial part of the conference, serving to welcome and engage participants, set the context for discussions, and recognize the contributions of key individuals.

9. Conference Proceedings Book Release

13th International Conference on Recent Challenges in Engineering and Technology (13th ICR CET - 2024) Conference proceedings was a comprehensive collection of the papers presented at the 13th ICR CET – 2024. Conference Proceedings serve as a valuable record of the research and discussions that occurred during the 13th ICR CET - 2024 conference, providing insights into current trends, innovations, and the future direction of multidisciplinary research studies and education.

On behalf of the organizing committee of the 13th ICR CET – 2024, the conference proceedings was released.





IFERP Academy
Fostering Skill, Promoting Excellence



St. Joseph's
College of Engineering
Chennai, India



ICRCET
2024

13TH INTERNATIONAL CONFERENCE ON

Recent Challenges in Engineering and Technology



27th & 28th
Sep 2024

VIRTUAL CONFERENCE

Organized by
St. Joseph's College of Engineering, Chennai
IFERP Academy

#IFERPsupportsSDGs

1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	SUSTAINABLE DEVELOPMENT GOALS

<https://www.iferp.in/past-conferences.php>

10.Momento Ceremony

The conference speakers, session speakers, & session chairs were awarded with Momentos.



11.Technical Presentation Sessions

11.1 Speech by Session Speaker Assoc Prof. Dr. Beauty Pandey



**Assoc Prof. Dr. Beauty
Pandey**
Woxsen University
India.

11.2 Technical Presentation Session 1 A

11.2.1 – 11.2.13 Total 13 scientific presentations were presented in the Technical Presentation
Session 1 A

11.3 Technical Presentation Session 1 B

11.3.1 – 11.3.13 Total 13 scientific presentations were presented in the Technical Presentation Session 1 B

11.4 Technical Presentation Session 2 A

11.4.1 Speech by Session Speaker Assoc Prof. Dr. Mohsin Shaikh



**Assoc Prof. Dr. Mohsin
Shaikh**
MIT World Peace University
India.

11.4.2 – 11.4.13 Total 13 scientific presentations were presented in the Technical Presentation Session 2 A

11.5 Technical Presentation Session 2 B

11.5.1 Speech by Session Speaker Prof. Dr. R. Rajaraman



Prof. Dr. R. Rajaraman
Saveetha Engineering
College
Anna University
India.

11.5.2 – 11.5.13 Total 13 scientific presentations were presented in the Technical Presentation Session 2 B

11.6 Technical Presentation Session 3 A

11.6.1 – 11.6.16 Total 16 scientific presentations were presented in the Technical Presentation Session 3 A

11.7 Technical Presentation Session 3 B

11.7.1 – 11.7.16 Total 16 scientific presentations were presented in the Technical Presentation Session 3 B

12. Award Ceremony - Best Paper Presentation Awards

Name	Paper Title
Rolando B Magat Jr	Paper Title : Teachers' Familiarity, Perceptions, and Training Needs on the Use of ChatGPT in Mathematics Instruction
Joanna Marie A de Borja	Paper Title : Mapping Technical-Vocational Pathways for Cabuyao: Rapid Assessment of Current and Future Trends and Roles
Shainima Islam	Paper Title : Career Development of Female Leaders: A Comprehensive Bibliometric Analysis of Female Leadership Literature
José Ramón Panduro-Ríos	Paper Title : Per diem management and internal control in the modernization of the State in a public organization, 2024
Roel Jr D Apas	Paper Title : Challenges Faced by Indigenous Women in Gender Equality: An Analysis of Lived Experiences

13. Valedictory Function

13.1 Conference - Conclusion Summary

The 13th International Conference on Recent Challenges in Engineering and Technology (13th ICRCET - 2024), held on 26th & 27th September, 2024, Chennai, India organized by IFERP Academy and St. Joseph's College of Engineering, Chennai, India brought together a diverse group of experts, practitioners, and enthusiasts from various fields. The central theme of the conference was "Engineering Excellence in the Face of Technological Challenges" and it successfully fostered a collaborative environment for sharing knowledge, insights, and advancements to achieve SDGs.

Key Highlights:

The conference commenced with an inspiring Inaugural Speech by Dr. Vaddi Seshagiri Rao, Principal, St. Joseph's College of Engineering. Keynote Speakers highlighted the recent breakthroughs and the potential for future developments in engineering, science & technology and multidisciplinary areas.

Research Presentations:

Over 120 research papers were presented, covering a wide range of topics. These presentations showcased cutting-edge research and fostered lively discussions.

Networking Opportunities:

The conference facilitated numerous networking events, allowing attendees to connect with peers, potential collaborators, and industry leaders. The virtual and in-person networking sessions were particularly well-received, enhancing professional relationships and sparking new partnerships.

Achievements and Outcomes:

- Several new collaborative initiatives were announced, aiming to address global challenges. These initiatives will leverage the collective expertise and resources of participating organizations.
- Publication of Proceedings including the conference proceedings, including research papers and keynote addresses, will be published. Future Conferences: Plans for the next conference were discussed, with suggestions for topics and formats that could further enhance engagement and impact.

Closing Remarks:

In the closing session, IFERP expressed its gratitude to all the participants, academic partners, sponsors, and organizers. IFERP highlighted the conference's success in achieving its objectives and underscored the importance of continued collaboration and innovation. Attendees left with a sense of accomplishment and a renewed commitment to advancing in their fields.

The conference concluded on a high note, with participants energized and motivated to apply the insights gained to their respective fields. The event not only celebrated current achievements but also set a forward-looking agenda for future research and development.

14. Vote of Thanks

Dear Researchers, Academicians & Students,

As we draw to the close of this remarkable 13th International Conference on Recent Challenges in Engineering and Technology (13th ICR CET - 2024), it is our honor and privilege to extend a vote of thanks on behalf of the organizing committee. Today has been a day filled with insights, inspiration, and invaluable networking opportunities, and none of this would have been possible without the collective efforts of many individuals and organizations.

Firstly, we would like to express our deepest gratitude to our esteemed speakers. Your expertise, thoughtful presentations, and engaging discussions have been the highlight of this conference. You have not only enlightened us with new knowledge but have also inspired us to think critically and creatively about the challenges and opportunities in our field.

A special thanks to our dedicated organizing committee and volunteers. Your hard work behind the scenes, meticulous planning, and tireless efforts have ensured that everything ran smoothly. Your passion and dedication are truly commendable, and this event could not have happened without you.

We are also grateful to our attendees. Your active participation, thoughtful questions, and enthusiastic engagement have added great value to this conference. It is your eagerness to learn and share that makes the events like this so rewarding and worthwhile.

We would like to acknowledge the venue staff for their excellent service and hospitality, providing us with a comfortable and conducive environment for our discussions and networking.

Finally, I want to thank everyone who has contributed, in big ways and small, to the success of this conference. Whether you were a speaker, sponsor, attendee, or volunteer, your involvement has been crucial.

As we conclude, let us take with us the knowledge we have gained, the connections we have made, and the inspiration to drive forward in our respective fields. We look forward to seeing you at future conferences and continuing these valuable conversations.

15. Conference Glimpses



16. General Comments & Feedbacks

Overall Comments of the Participants:

- Organizing and Coordination was excellent and professional.
- Speakers were no doubt enriching.
- Overall, an excellent International Conference.
- Workshop was very interactive
- The introduction of the conference program was so effective that it distracts you from the research topic.
- Keynote speakers talks were worth listening. Issues were resolved carefully.