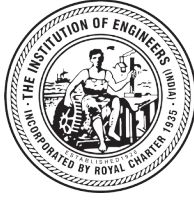


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The Institution of Engineers (India)

In service of the Nation since 1920



35th

Indian Engineering Congress

December 18-20, 2020

Online Platform

Theme

Engineering for Self-reliance and Sustainable Goals

About The Institution of Engineers (India)

The Institution of Engineers (India) or IEI is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform for sharing professional interest. IEI has membership strength of above 0.8 million. Established in 1920, with its headquarter at 8 Gokhale Road, Kolkata-700020, IEI has served the engineering fraternity close to a century. During this period of time, IEI has been inextricably linked with the history of modern-day engineering.

In 1935, IEI was incorporated by Royal Charter and remains the only professional body in India which has been accorded this honour. Today, its quest for professional excellence has given it a place of pride in almost every prestigious and relevant organization across the globe. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating through its 125 Centres located across the country and 6 overseas chapters. Besides, IEI has bilateral agreements with about 31 international bodies and membership of another 8 international bodies of the developed nations across the globe.

Being recognized as a Scientific and Industrial Research Organisation (SIRO) by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, IEI promotes the cause of research and development by providing Grant-in-Aid support to undergraduate, post graduate students and PhD Research Scholars of Engineering Institutions and Universities.

IEI conducts Section A & B Examinations in various engineering disciplines (popularly known as AMIE examination), the successful completion of which is recognized as equivalent to Degree in appropriate field of Engineering of recognized Universities of India by the Ministry of Human Resources Development, Government of India. Every year a large number of candidates appear for these examinations.

IEI in collaboration with Springer regularly publishes peer-reviewed international journal in five series, namely, Series A, Series B, Series C, Series D and Series E covering fifteen engineering disciplines.

For further details, please visit: www.ieindia.org.

Indian Engineering Congress

The aim of the Indian Engineering Congress is to bring to fore the developments in various fields of engineering and prepare our engineers to face the future challenges for sustainable development of the country.

The objectives of the Indian Engineering Congress are:

- To debate and discuss the theme of the Congress to create awareness, promote ideas, innovations in their respective engineering disciplines.
- To provide Engineers with a forum for exchange of knowledge, updating information and developing a sense of responsibility in their professional functioning.
- To promote and inculcate social responsibilities of engineers towards fulfilling the basic needs of common citizen of our country.

- To promote the Engineering practice that meets the challenges of sustainable resource management.
- To promote Emergent Engineering Challenges.

Theme of the 35th Indian Engineering Congress

“Engineering for Self-reliance and Sustainable Goals”

Self-reliance and sustainable development are associated with each other. These two do care for the welfare of the human well-being, the basic needs of the poor, the prospects of the future generations and preservation of environmental resources. The two key imperatives for achieving sustainable goals include; the first; there is a need to internally identify and adopt realistic indicators of sustainability to steer and guide development in India. Secondly, there is an urgent need for institutional reforms to achieve self-reliance situation in the country. Government of India has been taking several steps to ensure that we are well prepared to face the challenges and threats posed by COVID-19. India has faced the COVID-19 situation with fortitude and a spirit of self-reliance that is evident in the fact that from zero production of Personal Protection Equipment (PPE) before March 2020, India today has created a capacity of producing 2 lakh PPE kits daily, which is also growing steadily. However, engineers of the country have to come forward to give engineering solutions of the complex problems like COVID-19 being faced by the country. The clarion call given by the Hon'ble PM to use these trying times to become self-reliant has been very well received to enable the resurgence of the Indian economy.

The Indian engineering community subscribes to the above philosophy and has done itself proud. The ultimate goal of self-reliant India should be reduction of poverty and livelihood development through equitable pursuit of prosperity. The engineering community will harness and manage the natural resources with equity lens and demand level-playing field.

The country has the resources, the institutions and the mindset too. Engineers do need to work towards a fusion of our positive achievements. This is the essential condition for India's path towards self-reliance and emergent role in global engineering and technology. With the seamless engineering and technology capabilities, tempered by the social and political systems, Indian engineers can be the harbinger to the development of the sustainable economy of the country in the post-pandemic regime.

This congress will provide platform to the researchers, academicians, R&D professionals, policy makers, industry players, young engineering talents to address the critical relationship between self-reliance and sustainable goals. The combination of self-reliance and sustainable development goals will have a positive impact on human capital development.

Sub-themes:

- 1) Design and Engineering for a Self-reliant Society.
- 2) Sustainable Manufacturing: Principles, Applications and Directions.
- 3) Managing Risk and Uncertainty in Engineering Design and Application.
- 4) Adaptive Technology for Human capital development.

- 5) Engineering Innovations, Incubation (Start-up) and Entrepreneurship for a Self-reliant Country.
- 6) Innovative Hybrid Teaching Methodologies for Engineering and Technical Education.
- 7) Enhancing Skill, Quality and Safety for a Self-reliant Country.
- 8) Role of Technical Higher Education ---National Education 2020 Perspective

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|----------------------------------|---|
| Aerospace Engineering | Agricultural Engineering |
| Architectural Engineering | Chemical Engineering |
| Computer Engineering | Civil Engineering |
| Electrical Engineering | Electronics and Telecommunication Engineering |
| Environmental Engineering | Marine Engineering |
| Mechanical Engineering | Metallurgical & Materials Engineering |
| Mining Engineering | Production Engineering |
| Textile Engineering | The above areas are indicative. Authors may also submit papers on other areas based on the main theme of the 34 th Indian Engineering Congress |

Call for Papers

Engineering professionals from Industries, Academic Institutions, Research & Development Organisations, Government Departments and Entrepreneurs are invited to contribute papers pertaining to the theme and sub-themes of the Congress under each of the following 15 engineering disciplines of IEI. The papers should focus on sharing the experience, concepts, innovative ideas, research findings etc.

Submission of Synopsis / Full Text

The authors are requested to submit the synopsis and full text (post-acceptance of synopsis) through e-mail to iectech@ieindia.org

Nodal Dates

| | |
|---|----------------------------|
| Submission of full-text | November 25, 2020 |
| Intimation to authors regarding session details | 1st Week of December, 2020 |

Guidelines for Authors

Guidelines for Authors

Authors intending to submit a paper for 35th Indian Engineering Congress are advised to adhere to the guidelines as mentioned below. The papers not conforming to these guidelines may not be considered for review / publication. The full text of accepted papers will be published by a reputed publisher in the **Technical Volume of the 35th Indian Engineering Congress (with ISBN)**.

Preparation of Full Text of Paper

1. **Synopsis of Paper** within 500 words with maximum five key-words have to be submitted along with **Full Text**. The author should mention the Engineering Discipline of the paper on the top right hand corner.
2. Papers should be camera-ready in MS-Word format, not exceeding 3000 words in length and should not carry more than 5 illustrations /photographs.
3. The language of the Publication is English. The mode of presentation should be in third person.
4. SI units should be used wherever possible. Other units, if used, should be given only in parentheses preceded by SI units.
5. Mathematical symbols should be typed and care should be taken to differentiate between similar characters (e.g. 1

and I), upper and lower case letters and superscripts and subscripts.

6. Lengthy mathematical proofs and derivations and extensive test data are discouraged. If absolutely essential, they should be given as an appendix.

7. The Template of Paper can be downloaded from the link :

https://www.ieindia.org/webui/IEI-Activities.aspx#Call_Papers

The decision will be communicated to those authors whose paper is accepted.

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