



# The Institution of Engineers (India)

*"A Century of Service to the Nation"*

## **36<sup>TH</sup> NATIONAL CONVENTION OF TEXTILE ENGINEERS AND NATIONAL SEMINAR ON "SMART TEXTILES"**

October 06 - 07, 2023



*Organised by*  
**The Institution of Engineers (India)**

**TAMILNADU STATE CENTRE**  
**Centenary Year (1922 - 2022)**

*Under the aegis of*  
**Textile Engineering Division, IE(I)**

### **Venue**

**Hotel Savera**  
**No. 146, Dr Radha Krishnan Salai,**  
**Mylapore, Chennai - 600 004.**



## **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 from which to share professional interest. IEI has membership strength of over 0.8 million. Established in 1920, with its headquarters at 8 Gokhale Road, Kolkata - 700020, IEI has served the engineering fraternity for over nine decades. In this period of time it 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 to be 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. IEI functions among professional engineers, academicians and research workers. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating from 125 Centres located across the country. The Institution also provides grant-in-aid to its members to conduct research and development on engineering subjects.

IEI has been recognized as Scientific and Industrial Research Organization (SIRO) by the Ministry of Science & Technology, Govt. of India and besides conducting its own research, provides Grant-in-Aid to UG/PG/ PhD students of Engineering Institutes & Universities.

IEI holds the International Professional Engineers (IntPE) Register for India under the global International Professional Engineers Alliance (IntPEA). The Institution also awards the Professional Engineers (PE) Certification.

For details, please visit [www.ieindia.org](http://www.ieindia.org)

## **ABOUT TAMILNADU STATE CENTRE**

The Tamilnadu State Centre was established originally as the Southern India Centre at Chennai on 22nd December 1922. The Southern Region covered the erstwhile Madras, Andhra, Mysore, Hyderabad and Travancore – Cochin. As more centres were opened in the Southern Region, it was renamed as Madras Centre and later became the Tamilnadu State Centre. Tamilnadu State Centre has a special significance in the formation of the Institution; for the IEI was registered in 1920 in then Madras Province at Chennai. The registered office was subsequently moved to Calcutta the Head Quarters of IEI. The Chief Guest for the Inaugural Function of the Annual General Session of IEI Madras Centre in 1959 was Thiru K Kamaraj, Chief Minister of Tamilnadu. The Tamilnadu State Centre is the most active centre in the country and has been serving the society in general and the engineering community in particular with the said objectives and plays a significant role in dissemination and proliferation of knowledge amongst its members. With a modest membership to start with, the centre has brought into its fold a large section of fraternity with a membership strength of more than 30000 Corporate Members and more than 80000 Non – Corporate Members widening its horizon of technical activities. The centre has established sixteen Local Centres at Neyveli, Madurai, Coimbatore, Tiruchirappalli, Salem, Kalpakkam, Ranipet, Tuticorin, Hosur, Kanyakumari, Tirunelveli, Thiruvallur, Kanchepuram, Thanjavur, Erode and Kattankulathur to serve more professional groups. The major activities of the Division include: Annual National Conventions, Annual & Semi-Annual Paper Meetings; Publication of Journals; Workshops / Seminars and Symposia and Prizes and Awards.

## **ABOUT THE CONVENTION**

The technology of “Smart Textiles” is an integration of almost all disciplines of applied sciences like Textile Technology, Textile Chemistry, Material science, Cloth manufacturing technology, Structural mechanics, Electronics, Artificial intelligence, and Biotechnology. These myriad sciences are blended with one another to produce fashionable textiles which make our lives comfortable and luxurious. SMART TEXTILES, however, are not just restricted to clothing and apparel but extend to many other applications like automobiles, robotics, aircraft, medicine, surgery, etc. Passive smart textiles: the first generations of ST, are only able to sense the environment or user based on sensors, such as UV-protective clothing, conductive fibres, and so on. Because they are merely sensors, passive smart textiles can only perceive their surroundings. Active ST: the second generation has both actuators and sensor textiles which adapt their functionality to changing environments automatically are active smart textiles. They are shape memory,

chameleonic, water resistant and vapour permeable (hydrophilic and non-purposes, heat storage, thermos regulated, vapour absorbing active fabrics that rely on electricity to support actuators and sensors. These actuators and sensors enable the intelligent material to detect touch and temperature and analyse and interpret a wide range of environmental data. Ultra ST: they are the third generation of St which can sense, react and adapt themselves to environmental conditions or stimuli an ultra-smart textile is made up of a unit that functions similarly to a brain, with cognition, reasoning, and activation capabilities.

### PAPERS FOR PRESENTATION

- ◆ Wearable electronic textiles
- ◆ Technical textiles
- ◆ Medical textiles
- ◆ Computing Textiles
- ◆ Chameleonic textiles
- ◆ Space suits
- ◆ Passive smart textiles
- ◆ Active smart textiles
- ◆ Very or ultra-smart textiles
- ◆ Comfort wear
- ◆ Cosmetic textiles
- ◆ Intelligent bra
- ◆ Ultraviolet protective clothing
- ◆ Ceramic-coated textiles
- ◆ Thermo-regulated textiles
- ◆ Protective Textile for sharp armour and weapons
- ◆ Protective Textile for Glacier region
- ◆ Modern techniques for yarn processing
- ◆ ZDHC – Zero discharge hazardous chemicals – textile dyeing
- ◆ Advanced wastewater treatment & disposal

### Call for Papers

Prospective authors are invited to submit their manuscripts reporting original research and recent developments in the topics related to the conference to reach the administrative office not later than **4<sup>th</sup> September 2023**. Kindly submit the soft copy of the presentation material in word format to our office **email id: [ieitamilnadu@gmail.com](mailto:ieitamilnadu@gmail.com)**. Selected Papers will be published in Scopus Indexed Springer Journal of IE(I) : Series E Chemical and Textile Engineering.

### MEMBER / DELEGATE REGISTRATION FEE

IEI Members Delegate Fee	INR 1500/-	Research Scholars / Students INR 750/-
Non IEI Members Delegate Fee	INR 2000/-	

GST 18 % Applicable extra

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Full Page (colour)	INR 10,000/- (1 Free Delegate)
Half Page (colour)	INR 5,000/- (1 Free Delegate)

GST 18% Applicable extra

## DATES TO REMEMBER :

➤ Submission of Abstracts	- 04 <sup>th</sup> September 2023
➤ Acceptance of Abstracts	- 08 <sup>th</sup> September 2023
➤ Last date of Submission of Papers	- 16 <sup>th</sup> September 2023
➤ Seminar Dates	- 06 <sup>th</sup> - 07 <sup>th</sup> October 2023

## REGISTRATION & PAYMENTS

All payments are to be made through crossed Demand Draft / Cheque / NEFT / Online Net Banking Transfer in favour of: **"The Institution of Engineers (India), Tamilnadu State Centre"**. In case of NEFT / Online Net Banking transfer, please mention the following:

Beneficiary Name : The Institution of Engineers (India), Tamilnadu State Centre  
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## TRAVEL & ACCOMMODATION

All delegates are advised to make their own arrangements for travel, boarding & lodging.

## NATIONAL ADVISORY COMMITTEE

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## ORGANISING COMMITTEE

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**Dr J Balamurugan**, Honorary Secretary, IE(I), Tiruvallur Local Centre

## TECHNICAL COMMITTEE

Chairman : **Dr T Saravanakumar**, Founder & Director, Dev Innotech LLP  
Co-Chairman : **Prof Dr D Elango**, FIE, Chairman, IE(I) Kancheepuram Local Centre  
Members : **Mr Rajamanickam**, Principal (Retd), Institute of Textile Technology, Chennai  
**Dr M Murugesan**, Professor, Textile Technology, Anna University, Chennai  
**Mr V.R. Karthikeyarayan**, Associate Professor, NIFT, Chennai  
**Dr Saravanan AR**, HoD, Dr. Dharmambal Government Polytechnic College for Women, Chennai

**CONTACT: Convener, The Institution of Engineers (India), Tamilnadu State Centre  
No 19, Swami Sivananda Salai, Chepauk, Chennai – 5**

**Ph. : 044-2536 0614 / 9962950333 Email id: ieitamilnadu@gmail.com, tnscc@ieindia.org**

**36<sup>TH</sup> NATIONAL CONVENTION OF TEXTILE ENGINEERS AND  
NATIONAL SEMINAR ON "SMART TEXTILES"**



**The Institution of Engineers (India)**

Tamil Nadu State Centre

October 06 - 07, 2023

**REGISTRATION FORM / ADVERTISEMENT BOOKING FORM**

The Honorary Secretary  
The Institution of Engineers (India)  
Tamil Nadu State Centre  
19, Swami Sivananda Salai  
Chepauk, Chennai-600 005

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