Information Brochure

The Institution of Engineers (India)

A Century of Service to the Nation

All India Seminar

on

"Green Technology for Sustainable Food Production and Processing"

Date: 24.10.2024 & 25.10.2024

Organized by

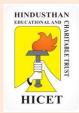


The Institution of Engineers (India) Coimbatore Local Centre

Under the Aegis of

Agricultural Engineering Division Board, IEI

In association with



Department of Food Technology

(Accredited under Tier I category by NBA)

Hindusthan College of Engineering and Technology

Coimbatore - 641032

Venue: Ganga Seminar Hall Hindusthan College of Engineering and Technology Coimbatore - 641032

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 Kolkata, 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 124 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 Research Organization (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 Grantin-Aid support to undergraduate, post graduate students and PhD Research Scholars of Engineering Institutions and Universities.

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

About Coimbatore Local Centre

The Centre was founded in the year of 1965, under the Chairmanship of Dr G R Damodaran, an educationist, the former Vice - Chancellor of Madras University, philanthropist and also the architect of PSG College of Technology, Coimbatore who lived for the technology development of the Nation. For more than five decades, the IE(I), Coimbatore Local Centre (CLC) has contributed a lot to the engineering community and to the society as a whole. The Institution of Engineers (India), Coimbatore Local Centre has been adjudged the "Best Local Centre" based on all-round performance during the year 2022 - 2023 and has also received the Best Local Centre Award in 2019 - 2020.

About the College

Hindusthan College of Engineering and Technology (HICET) Coimbatore, is one of the Best Colleges in Coimbatore, which established in the year 2000 by the great Industrialist and Philanthropist, Thiru.T.S.R.Khannaiyann of Hindusthan Educational Trust whose determination and dynamism made possible the realization of this institution of excellence. Surrounded with

natures pristine beauty and an excellent infrastructure coupled with dedicated and experienced faculty has made the campus a much sought-after abode of learning. HICET is one of the premier technological institutions inculcating quality and value-based education through innovative teaching learning process for holistic development of the students. The institution is recognized under Section 2(f) and 12B of University Grants Commission (UGC) and is an autonomous institution affiliated to Anna University, Chennai with permanent affiliation for most of the programs, approved by the AICTE and the Government of India. Accredited by the National Assessment and Accreditation Council (NAAC) with 'A++' grade, 11 UG & 2 PG programmes are accredited with National Board of Accreditation (NBA) under Tier I category.

The Institute is ranked 158th in India Today Ranking and spotted as the Nodal Centre for Smart India Hackathon. One more feather in the crown is a Ford EcoSport car worth 22 lakhs gifted by Ford India and also the Best Accredited student Branch Award from Computer society of India. Further, Establishment and Innovations plays a major role in the academic year 2020-21 Centre of Excellence with Royal Enfield and Eicher Motors are established.

The institution continues to be top in the country (National Rank band 201-300 as per Nation Institutional Ranking Framework 2024-25 & Rank band 50 in Innovation Category). HiCET conducts seminars and also invites companies to give presentations that helps our students to choose a right career for themselves and has hence contributed to the industry by successfully delivering fresh recruits who have contributed continuously to the growth of the industry by being a part of the top-notch organizations. For all these reasons HiCET has been a preferred institute for recruiting young minds.

Currently, there are around 5000+ students pursuing Undergraduate programs (B.E./B.Tech.) under 16 various departments, and under 6 Postgraduate programs (4 M.E./M.Tech, MBA & MCA) and 14 Ph.D. research programs in the Institution and are mentored by above 400 well qualified and experienced faculty members. HiCET nurtures future global leaders by imparting knowledge, skills and building attitudes among students to face the world in a fresh, energetic and unrestrictive work environment. In keeping view of the severity of COVID-19, the faculty members were able to gain and sustain student engagement by being creative with lectures that integrate props, student polling, and videos on online mode.

About the Department

The department of Food Technology in HICET was established in the year 2018 and offers 4 years B.Tech. Food Technology degree programme, which is Accredited by NBA under Tier 1 category. This prestigious recognition reflects our commitment to maintaining high standards of education, infrastructure, and overall academic quality. The main mission of the programme is to impart students with vibrant technical & analytical skills to handle all the problems relating to the food industry, and to explore the research opportunities in the globe. The department has a heartfelt team of dedicated faculty members with a sound knowledge in several food processing areas. The faculty members use ICT tools and e-learning platforms to enrich their knowledge and delivers the same effectively to the students. Also, they equip themselves with technical and soft skills by participating and presenting in many national, international conferences, Faculty Development Programs (FDPs) etc.

The accreditation ensures that our curriculum, faculty, and facilities meet the rigorous benchmarks set by the NBA, preparing our students for successful careers in the food technology sector. With this accreditation, we continuously strive for excellence in teaching, research, and innovation, ensuring our graduates are industry-ready and equipped with the latest knowledge and skills. This department has the state-of-art facility labs include Food Microbiology, Food Analysis & Quality Control, Food Process & Equipment Design, Baking and Confectionery Technology, Dairy Engineering, Food Packaging, Fruits & Vegetables Processing Technology, Food chemistry, Unit Operations in Food Processing etc., to conduct regular academic practical's, hands on training to the students & faculties, self-help groups, small scale enterprises, and women entrepreneurs. The laboratory facilities facilitate the students and faculty members to do research works in Food Technology and allied sectors that affords funded proposals, publications, patents as outcomes.

The students are provided with more opportunities by providing industry ready certificate & training courses (FSSC 22000 V5.1/ISO 22000:2018, HACCP - Internal & Lead auditors), empowering them for the industry needs as well as entrepreneurship skills. The department also offers FoSTaC (Food Safety Training and Certification) certification course under FSSAI, Government of India in three levels as Basic, Advance, & Special and empaneled as one of the training centre in India. Apart from these, the department offers value added courses like Beverage Technology, Computer Applications in Food Industry, Food Product Development, Waste Management & Value Addition, Food Colours and Flavours Technology etc., that enables the students to acquire more knowledge and skills to participate in various grand challenges offered by our government, national and international level project contests & competitions. The department organizes seminars, symposiums, conferences, special lectures, workshops, and Industrial visits for the betterment of our students in all the aspects of knowledge updating and skill development, which would be helpful for their career opportunities. The students have huge internship & placement opportunities in Food E-Commerce sectors and many industries included Britannia, Hatsun Agro, ITC, CavinKare, Hector beverages, UNIBIC, Aroma, Lotte, Perfeti, Marico, WayCool, Duke Thompson, Inter Snack Foods etc. The department have signed MoU's with food industries and government research centres that provide the practical knowledge and tackle real-world problems. Food Technology department extends it support to access and deliver multiple online courses, interaction with researchers, scientist, and academicians.

About the Theme

The global food industry faces increasing pressure to adopt sustainable practices that minimize environmental impact, conserve resources, and promote social responsibility. As a concern about climate change, resource depletion, and food security intensify, there is a growing need for innovative solutions that integrate green technologies into food production and processing. This seminar aims to explore the latest advancements, challenges, and opportunities in utilizing non-thermal technologies/green technologies to achieve sustainability across the food value chain.

The environmental impact of the food industry is of increasing concern for our society. Consumers are aware of the effects of food processing on the environment in addition to nutrition, safety, and sensory aspects of food items. All the food industries must now aim to meet reductions in the amounts of harmful substances produced, energy consumption and increase in by-product recycling. The food industry is continuously looking for sustainable and eco-friendly

approaches to address issues with food safety. Due to these concerns, the agri-food industry has created and adopted a variety of sustainable technology ideal for farming and food processing. However, "Green Technology" concepts are currently driving the development of new techniques in this field. Emerging green technologies are capable of superseding conventional thermal treatment, which negatively affects the physical, nutritional and bioactive properties of food, and are also more environmentally friendly. Novel green techniques include ionizing and ultraviolet radiation, ohmic heating, high power ultrasound, high hydrostatic pressure, and pressurized carbon dioxide, which all impose mild conditions on food matrices. Furthermore, these technologies can improve the sensorial and nutritional properties of food and maintain the food safety standards provided by thermal technologies. Compared with conventional technologies, green technologies provide microbial reduction and shelf-life extension for a range of foods, including fresh minimally processed fruits and vegetables, fish, and meat products. As consumers are known to demand ready to eat food stuffs, innovative techniques have been developed to extend the shelf life of fresh and processed foods, novel active packaging systems can incorporate natural compounds with bioactive properties, including antimicrobial and/or antioxidant activity. This All-India seminar provides a platform to the young minds and aspiring Food Technologists who would like to share their knowledge and expose their talents in the same field. This event will help to understand the concept of green manufacturing process in terms of waste reduction, energy saving, sustainability packaging and manufacturing. This also provides insights to inculcate techniques in the field of Food and Agriculture Processing Sector and offers learning on emerging trends, challenge in greening of food sectors.

Sub Themes

- Novel methods of Food Preservation and its applications in fruit and vegetable processing
- Novel and sustainable food technologies to augment food production, safety, and quality
- > Thermal and nonthermal food preservation technologies viz., Ohmic heating, high pressure processing, Ultraviolet, Radio frequency etc.
- Advanced Food Processing Technologies Current Trends and Prospects
- > Al, IoT, 3D food printing and Image Processing Technology in food processing
- Renewable Energy Integration in Food Production
- Water Management and Conservation in Food Processing
- Waste Reduction and Resource Efficiency
- > Food Safety and Quality Assurance in Sustainable Food Production
- Biotechnology and Genetic Engineering for Sustainability
- Precision Agriculture and Smart Farming Technologies
- Carbon Footprint Reduction in Food Supply Chains

Call for Papers

All interested participants are requested to contribute technical/ research papers and case studies detailing concept, innovation, idea or practical experiences for oral presentation. Each paper should begin with a synopsis of about 200 words and preferably within 3000 words excluding figures, tables and references. Paper can be send to (coimbatorelc@ieindia.org, fthod@hicet.ac.in, symposium.ft@hicet.ac.in).

Resource Persons

Expert members from various leading academic institutions and R&D departments.

Eligibility

IEI Members, UG Students, PG Scholars, Faculty Members, Research Scholars, and Practicing Engineers.

How to Apply:

Registration* for the seminar can be made by sending the duly filled application through email or by filling the registration link on or before **17.10.2024**.

Registration Link: https://forms.gle/Gwi8Bo2eCQyXxbvt9

Registration Fee (including GST)

	₹
IEI Corporate Members	472.00
UG / PG / Research Scholar	472.00
Faculty Members	708.00
Participants from Industry	944.00

Payment

All payments are to be made through crossed Demand Draft / At par Cheque, drawn in favour of The Institution of Engineers (India), Coimbatore Local Centre" payable at Coimbatore or online payment.

For Online Transfer

Name : The Institution of Engineers (India) Coimbatore Local Centre

Bank : State Bank of India

Branch : **Peelamedu Branch**, **Coimbatore**

Account No. : 10141435551

IFSC Code : SBIN0007231

GST No. : **33AAATT3439Q6ZW**

Note

- Limited participants only.
- No TA / DA will be paid.
- Kindly bring your College / Industry Identity Card.
- Registration through email is compulsory.
- * Registration fee includes: Refreshments, Lunch & Participation Certificate.

Importance Dates

Last date of registration : 17.10.2024
Last date for abstract submission : 17.10.2024
Paper acceptance intimation : 18.10.2024
Last date for full paper submission: : 20.10.2024

Chief Patrons: Shri T S R Khannaiyann, Chairman, Hindusthan Educational and Charitable Trust

Smt T R K Sarasuwathi, Secretary, Hindusthan Educational and Charitable Trust **Dr K Priya**, Executive Secretary, Hindusthan Educational and Charitable Trust

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Dr J Jaya FIE, Principal, Hindusthan College of Engineering and Technology

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Convener: Dr G Jeevarathinam, Associate Professor and Head, Department of Food Technology

Hindusthan College of Engineering and Technology

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Secretary: Dr G Madhan Mohan, Honorary Secretary, IEI Coimbatore Local Centre

ORGANIZING COMMITTEE

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Secretary: Dr G Madhan Mohan FIE, Honorary Secretary, IEI Coimbatore Local Centre

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Dr A K Priya MIE, Committee Member, IEI Coimbatore Local Centre Dr T Ramesh MIE, Committee Member, IEI Coimbatore Local Centre

Dr V T Gopinathan MIE, Associate Professor and Head, Dept of Aeronautical Engineering

Hindusthan College of Engineering and Technology

TECHNICAL COMMITTEE

Chairman: Dr J Jaya FIE, Principal, Hindusthan College of Engineering and Technology

Convener: Dr G Jeevarathinam MIE, Associate Professor and Head

Department of Food Technology, Hindusthan College of Engineering and Technology

Members: Dr J Deepa, Associate Professor, Department of Food Technology

Hindusthan College of Engineering and Technology

Mr S Dillwyn, Assistant Professor, Department of Food Technology

Hindusthan College of Engineering and Technology

Ms T Nivetha, Assistant Professor, Department of Food Technology

Hindusthan College of Engineering and Technology

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Registration Form

All India Seminar

on

"Green Technology for Sustainable Food Production and Processing"

Date: 24.10.2024 & 25.10.2024

Venue: Ganga Seminar Hall Hindusthan College of Engineering and Technology Coimbatore - 641032

Name: (Block Letters)
Designation:
Organization / Institution:
IEI Membership Number & Division
Address for Communication
Mobile Number: Email:
I / We enclose a DD / CHEQUE / NEFT details for Rs
Transaction ID Number
Dated

Signature