

DAY ONE | APRIL 5th 2025

8:00 AM to 9:30 AM	DINING HALL	Registration Tea	
9:30 AM to 11:00 AM	TTJ Audi	Introduction to Fabricate 2025 Inauguration	
11:00 AM to 11:30 AM		Plenary Talk Dr. Sabu Thomas TrEST Research Park, Trivandrum	Nanostructured scaffolds for tissue engineering.
FABRICATE 2025	SESSION 01 > Advanced microenvironments for tissue engineering		SESSION 02 > Biofabrication techniques for clinical impact
	HALL 01	Session Chair Dr. Sachin Kumar B	HALL 03
	KEYNOTE SPEAKER	Dr. Deepak Kalaskar UCL, London	KEYNOTE SPEAKER
	Vascularisation : holy grail for biofabricated tissue		3D (Bio)Printing of clinically-relevant soft tissues
	INVITED SPEAKER	Dr. Shantanu Pradhan IIT, Madras	INVITED SPEAKER
12:00 PM to 12:20 PM	Nano-scale modulation of hydrogel properties for controlling cellular behavior		Innovative biofabrication techniques for clinical impact
12:30 PM to 12:45 PM	Cellulose-based bioactive material and turmeric impregnated flexible and biocompatible scaffold for bone tissue engineering Shital S CGU, Taiwan		INVITED SPEAKER
12:50 PM to 1:05 PM	Effectiveness of algae-infused composite scaffolds : an amalgam of ceramic and biopolymers for bone Rizwan N IIT, Kharagpur		Dr. Darren Player UCL, London
1:15 - 1:25 PM	3D Bioprinted Composite Hydrogel Scaffolds Incorporating Rare-Earth and Transition Metal Oxides Dilip K, Sathyabama		CONTRIBUTORY LECTURE
			Dr. N Ayyadurai CSIR-CLRI, Chennai
			Genetically growth factor-mimicking unnatural amino acid encoded scaffold for tissue engineering

POSTER VIEWING | LUNCH (1:30 PM - 2:15 PM)

DAY ONE | APRIL 5th 2025

FABRICATE 2025

SESSION 03 > Next Generation Nano-Biomaterials

SESSION 04 > Lab to Clinic : Safety, Standards & Scalability

HALL 01

Session Chair | Dr. Deepak Patil

HALL 03

Session Chair | Dr. Deepak Kalaskar

2:20 PM to 2:40 PM

KEYNOTE SPEAKER

Dr. Debrupa Lahiri
IIT, Roorkee

Exploring functionalities in tissue engineering templates through design and fabrication for neural regeneration

KEYNOTE SPEAKER

Dr. Jayesh Bellare
IIT, Bombay

Biodegradable 3D scaffolds for bone tissue engineering: translating from lab to clinic

2:50 PM to 3:05 PM

INVITED SPEAKER

Dr. Dilip Satapathy
IIT, Madras

Flexible thermoelectrics and protein-based soft actuators: pioneering the wearable and adaptive technologies

KEYNOTE SPEAKER

Dr. Sonal Asthana
Aster CMI Hospitals, Bengaluru

Development of absorbable biliary stents - from ideation to animal models

3:15 PM to 3:30 PM

INVITED SPEAKER

Dr. Sachin Kumar B
IIT, Delhi

Engineering nanomaterials for dual applications: ultra-sensitive sensing and accelerated wound healing

INVITED SPEAKER

Dr. Vineet Joshi
LVPEI, Hyderabad

3D bioprinting applications in corneal diseases clinicians perspective

3:40 PM to 3:55 PM

INVITED SPEAKER

Dr. Subham Banerjee
NIPER, Guwahati

FabRx: Fabrication of next-generation medicines

INVITED SPEAKER

Dr. Greeshma Thrivikraman
IIT, Madras

Light responsive hydrogel therapeutics for spinal tissue regeneration

4:05 PM to 4:15 PM

CONTRIBUTORY LECTURE

Dr. Kanchan Yadav
IISc, Bengaluru

Advanced nanomaterials for biosensing and other healthcare applications

CONTRIBUTORY LECTURE

Dr. Manoj Komath
SCTIMST, Trivandrum

Challenges in taking biomaterials-based products from concept to clinic

4:25 PM to 4:35 PM

Nanobiomaterials for peripheral nerve regeneration |
Nasera R | MIRM, Bengaluru

Indigenous scalable manufacturing of low-cost, efficient hollow fiber membranes for hemodialysis | **Pranav K | IISER, Bhopal**

POSTER VIEWING | NETWORKING | TEA (4:35 PM to 5:00 PM)

DAY ONE | APRIL 5th 2025

FABRICATE 2025

SESSION 05 > Organ on a Chip & Complex 3D Constructs

SESSION 06 > Precision Bioengineering for Tissue Regeneration

HALL 01

Session Chair | Dr. Janani Radhakrishnan

HALL 03

Session Chair | Dr. Dr. Vijayavenkataraman

5:00 PM to 5:20 PM

INVITED
SPEAKER

Dr. Tuhin Santra
IIT, Madras

KEYNOTE
SPEAKER

Dr. Sujata Mohanty
AIIMS, New Delhi

Micro/nano devices for cellular analysis
and biomedical applications

Printing the future: 3D bioprinting at the intersection of science and
innovation

5:25 PM to 5:40 PM

INVITED
SPEAKER

Dr. Prajakta Dandekar
ICT, Mumbai

CONTRIBUTORY
LECTURE

Dr. K Gopal Shankar
NIT, Calicut

Extrusion-based 3D bioprinting of GelMA-based
bioink for soft tissue regeneration

Leveraging decellularized plant materials for developing new-
generation 3D scaffolds for tissue engineering applications

5:50 PM to 6:05 PM

INVITED
SPEAKER

Dr. Andreas Blaeser
TU Darmstadt, Germany

CONTRIBUTORY
LECTURE

Dr. Manasa Nune
MIRM, Bengaluru

3D-bioprinting meets microfluidics – a versatile approach for the
automated bioproduction of vascularized organ-on-a-chip systems

Extracellular matrix-based biomaterials and bioinks for tissue
engineering applications

6:15 PM to 6:25 PM

Investigating hepatic osteodystrophy: dual-organ perfusion system as a
model for liver-bone pathophysiology
Purva G | IIT, Kanpur

Comparative evaluation of PLA scaffold designs for mandibular bone defects:
an invitro study
Pranav S | ACDS, Secunderabad

END OF DAY ONE

|| GALA DINNER ||

DAY TWO | APRIL 6th 2025

FABRICATE 2025

SESSION 01 > Biosensors & Bioelectronics

SESSION 02 > Alternatives to Animal Experiments

HALL 01

Session Chair | Dr. Kanchan Yadav

HALL 03

Session Chair | Dr. Aditi Jain

10 AM to 10:20 AM

KEYNOTE SPEAKER

Dr. Zong-Hong Lin
NTU, Taiwan

Self-powered devices based on triboelectrification

KEYNOTE SPEAKER

Dr. Biman Mandal
IIT, Guwahati

Bioengineered in vitro human organ models for high throughput screening and drug discovery

POSTER VIEWING | NETWORKING | TEA (10:30 AM - 10:50 AM)

10:50 AM to 11:05 AM

KEYNOTE SPEAKER

Dr. V. V. Raghavendra Sai
IIT, Madras

Optical sensors for health, water, food and pharma

INVITED SPEAKER

Dr. Amit Kumar Jaiswal
VIT, Vellore

Development of in vitro tissue engineered model for giant cell tumour of long bones

11:15 AM to 11:30 AM

INVITED SPEAKER

Dr. Snigdha Roy Barman
IIT, Madras

Self-powered triboelectric nanosensors: enabling chemical detection in robotic platforms

INVITED SPEAKER

Dr. Gowri Balachander
IIT, Varanasi

From organoids to organ-on-a-chip. transforming biology in 3D for meaningful pursuits

11:40 AM to 11:55 AM

CONTRIBUTORY LECTURE

Dr. Arunkumar Chandrasekhar
VIT, Vellore

Fabricating a sustainable future: recycling materials for triboelectric nanogenerators and self-powered sensors

Adoption of alternatives to animal experiments in India | our friends and foes
Dr. Kasturi M | CPHMS, AIC-CCMB, Hyderabad

Tradition with innovation: mimicking human skin with artificially reconstructed 3D skin models for biomedical applications | **Nidhi Lakhani | CIRC, Bengaluru**

DAY TWO | APRIL 6th 2025

FABRICATE
2025

	SESSION 03 > Navigating Academic Publishing and Career Building	SESSION 04 > Nanotechnology & Drug Delivery
	HALL 01	HALL 03
12 PM to 12:20 PM	<div>INVITED SPEAKER</div> <div>Dr. Aditi Jain American Society for Microbiology</div> <div>Microbes & manuscripts: trends shaping scientific publishing</div>	<div>KEYNOTE SPEAKER</div> <div>Dr. Chih-Ching Huang NTOU, Taiwan</div> <div>Carbon-based nanomaterials: a new frontier in combating pathogens in aquaculture and water systems</div>
12:30 to 12:45 PM	<div>SPONSORED SESSION</div> <div>Mahesh Kumar HiMedia Laboratories</div> <div>From Monolayers to Complex Tissues: The Role of Cero 3D Bioreactor in Culturing Spheroids and Organoids</div>	<div>INVITED SPEAKER</div> <div>Dr. Janani Radhakrishnan NIAB, Hyderabad</div> <div>Core-shell multi-functional fibrous mat with silk spidroin for immunomodulation-driven tissue engineering</div>
12:50 PM to 1:50 PM	<div>*PRIOR REGISTRATIONS MANDATORY</div> <div>Luncheon Panel Discussion: Exploring Academic Careers (Includes Food Packets)</div> <div>Debrupa Lahiri IITR Sanjib Senapati IITM Gowri Balachander IITBHU Deepak Patil NITC</div> <div>Session Chair Dr. Snigdha Roy Barman</div>	<div>Facile synthesis of carbonized nanovesicles from non-ionic surfactants for Polymyxin B encapsulation</div> <div>Ren-Siang Wu Chang Gung University, Taiwan</div> <div>POSTER VIEWING NETWORKING LUNCH (1:00 PM - 2:00 PM)</div>
2PM to 2:15 PM	<div>SPONSORED SESSION</div> <div>Mr. Chaitanya Doshi KORE AMMR</div> <div>Precision arduino-driven peristaltic pump: an open-source solution for biomedical fluid delivery</div>	<div>INVITED SPEAKER</div> <div>Dr. Vignesh Muthuvijayan IIT, Madras</div> <div>Engineering injectable silk fibroin-agarose hydrogels for localized sustained pirfenidone delivery</div>
2:25 PM to 2:35 PM	<div>SPONSORED SESSION</div> <div>Dr. Gopikrishna SubUnit Studio</div> <div>Creating impactful science graphics</div>	<div>INVITED SPEAKER</div> <div>Dr. Swathi Sudhakar IIT, Madras</div> <div>Unveiling cellular nanotherapeutic dynamics: molecular insights and mechanisms</div>

DAY TWO | APRIL 6th 2025

2:50 PM to 3:20 PM

FABRICATE
2025
SESSION 03 > Nanotechnology & Drug Delivery

TTJ Audi

Plenary Talk | Dr. Bikramjit Basu | Director-
 CSIR-CGCRI, Professor-IISc, Bengaluru
SESSION 04 > Nanotechnology & Drug Delivery
 Layer-by-layer printing of bio(material) inks with better shape fidelity
 and biocompatibility: current status and translational challenges

HALL 01

 Session Chair | Pooja Venkatesh & Piyush
 Padmanabhan

HALL 03

Session Chair | Dr. Swathi Sudhakar

3:35 PM to 3:50 PM

 Design and fabrication of a 2D cell-squeezing mechanoporation device
Pulasta C | IIT, Madras

**INVITED
SPEAKER**
Dr. Deepak Patil
 NIT, Trichy

 Self-powered robotic sensor for wireless heavy metal ion detection
Meenakshi R | NTU, Taiwan

 Fabrication of mechanobactericidal nanostructured metallic and
 polymeric surfaces

4:00 PM to 4:15 PM

 AMBA-Automated minimal invasive biotronic biopsy appliance for cancers and
 internal organ diseases
Dr. Malladi S | Gurusimha Life Sciences Private Limited

**INVITED
SPEAKER**
Dr. Shivendu Ranjan
 IIT, Kharagpur

 Advanced multiparametric bioimaging probe applications of
 uniquely synthesised carbon dots

|| TEA BREAK (4:15 PM - 4:30 PM) ||

4:30 PM to 5:20 PM

 Smart microfluidic-based flexible sensor for continuous sweat monitoring
Jaba RC | NTU, Taiwan

 Effect of natural shellac on the adhesion strength of hydroxyapatite – chitosan
 composite coating | **Ritwik A** | TIST, Kochi

 4D printing of sericin: transition from textile waste to medical wealth
Sachin L | IISc, Bengaluru

 Waste-to-value bio fabrication: transforming carbon-based waste into wearable
 sensors for human body | **Karthick N, VIT, Vellore**

 Development of superhydrophilic polycaprolactone/ κ carrageenan antimicrobial
 nanofiber | **Vandana K** | NIT, Andhra Pradesh

 Natural polysaccharide - based triboelectric nanogenerator : a sustainable and
 biodegradable approach to self powered sensor and E-SKIN | **Nimmi S** | VIT, Vellore

 Innovative bio-ink for effective removal of heavy metal as a sustainable solution
Yamini S | VIT, Vellore

 Bioinspired periodontium-on-a-chip drug testing tool for therapeutics in periodontitis
Abinaya R | IIT, Madras

 Development and characterization of injectable dECM-based hydrogels crosslinked
 with dialdehyde star | **Deepak T** | IIT, Madras

 Gold-disulfiram self-assembled nanomaterials: repurposed drug as antibacterial
 agents | **Han-Wei Chu** | Chang Gung University, Taiwan

Closing ceremony: Award announcements - Poster, Oral presentation, Best Early Careers Researcher, Vote of Thanks & Certificate Distribution