

ABOUT THE WORKSHOP

This one-day workshop on “3D bioprinting for organ replacement using biogenerative engineering” will provide in-depth knowledge and hands-on experience of the bioprinting process parameters and its applications in tissue regeneration. This workshop will focus on expounding various 3D bioprinting technologies, interdisciplinary aspects of 3D bioprinting, biomaterials in 3D bioprinting and bioink optimization and crosslinking strategies. Mainly, this workshop will provide an overview on the applications and challenges of three different 3D printers which are namely (i) Extrusion bioprinting, (ii) Melt extrusion printing (Fused deposition modeling) and (iii) UV-resin 3D printing with a live workshop demonstration. Moreover, this workshop also includes key note seminars from leading 3D bioprinting experts, tutorials related to assembly and use of 3D bioprinters and finally providing networking opportunities, status quo and career prospects in 3D bioprinting.

ABOUT THE INSTITUTE

PSG Institute of Advanced Studies (PSG IAS), one among the many educational institutions nurtured by PSG & Sons’ Charities Trust, which was established in the year 2005-06. The Nanotech Research Facility of PSG IAS was inaugurated by Dr. A. P. J. Abdul Kalam, Former President of India in 2009. The institute is affiliated to Anna University and Bharathiar University, Coimbatore as a research centre for carrying out research leading to M. Phil and PhD in the field of Nano Science and Technology, Nanobiotechnology, Biotechnology, Physics, Chemistry and Advanced Manufacturing. The main motto of the Institute is to inculcate the spirit of enquiry among learners. The Institute currently undertakes several sponsored projects from various agencies like DST, SERB, DBT, DRDO, etc. The Institute partners with pioneer universities like University of Toledo, San Diego State University, Texas A & M University, University of Oklahoma, Colorado State University, Colleges of Nanoscale Science and Technology, Albany, University of Central Florida, Georgia Tech, Wright State University, USA, Hof University of Applied Sciences, University of Applied Science, Bochum, Germany, University of South Australia, Deakin University, Flinders University, RMIT, Australia, University of Leeds, UK etc., in offering both UG and PG courses in the field of material science, innovative textiles, mechanical engineering, computer science and business administration.

3D BIOPRINTERS AT PSGIAS



**Extrusion bioprinter
(CELLINK BIO X)**



**Melt extrusion 3D bioprinter
(ULTIMAKER)**



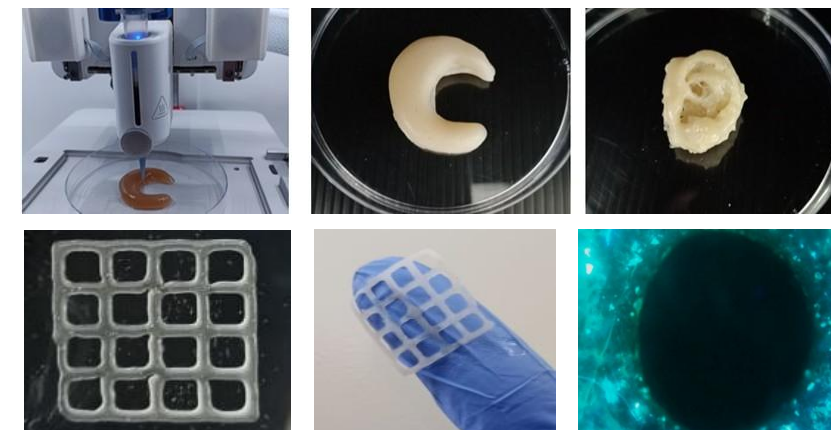
**UV-resin 3D bioprinter
(CREALITY)**

*One day workshop on
“3D bioprinting for organ
replacement using biogenerative
engineering”*

25th November 2022

Organized by

*Department of Biotechnology
Nanotech Research Innovation &
Incubation Centre
PSG Institute of Advanced Studies
Coimbatore-641004*



Patron

*Shri. L. Gopalakrishnan, Managing Trustee, PSG
Sons’ and Charities*

Convenor

*Dr. J. Kanchana
Deputy Director, PSG Institute of Advanced Studies*

Organizing Secretary

*Dr. K. Gopal Shankar
Assistant professor, Dept. of Biotechnology
Dr. R. Selvakumar*

*Professor & Head, Dept. of Biotechnology &
Nanobiotechnology
PSG Institute of Advanced Studies*

WORKSHOP HIGHLIGHTS



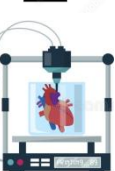
Live demonstration of 3D bioprinting process parameters



Expert crafted tutorials



Holistic learning process



Be part of 3D printing community



Intern/Do projects with us



Skill enhancement



Networking

EXPERT TALKS



Dr. K.R Ravi
Associate Professor & Head,
Department of Metallurgical &
Materials Engineering,
IIT-Jodhpur
(Title: *Advances in metal 3D printing*)



Dr. K. Gopal Shankar
Assistant Professor, Department of
Biotechnology, PSG Institute of
Advanced Studies, Coimbatore
(Title: *Organ and tissue bioprinting*)

TENTATIVE SCHEDULE

Time	Schedule
8:30-9:00 AM	Registration
9:00-9:30 AM	Inauguration
9:30-10:30 AM	Lecture I – Dr. K.R Ravi (IITJ)
10:30-11:00 AM	Tea break
11:00-12:00 PM	Lecture II – Dr. K. Gopal Shankar (PSGIAS)
12:00-1:00 PM	Lunch break
1:00-2:00 PM	Live demonstration (CELLINK, BIO X bioprinter)
2:00-3:00 PM	Live demonstration (FDM-Melt extrusion printing)
3:00-3:30 PM	Tea break
3:30-4:30 PM	Live demonstration (UV-resin based printing)
4:30-5:00 PM	Valedictory

REGISTRATION

Faculty members, Students, Scientists/ Researchers from Life and Chemical Sciences, Industrialists, Biotechnologists, Biomedical & Pharmaceutical Scientists, Nanotechnologist, Analytical Chemists, Energy and Environmental Scientists.

Note: Number of participants for this workshop is restricted to 20 members

CATEGORY	FEES (INR) (Inclusive of 18 % GST)
UG/PG Students	1180
Ph.D Scholars/Post Docs	1416
Faculty/Scientist	1770

REGISTRATION LINK

All participants must register in the below link with payment details

https://docs.google.com/forms/d/e/1FAIpQLSckZ6EojV07po2yvwlRaOVKuaLVmdECfhr1evX8KqtXdi81KA/viewform?usp=sf_link

The registration fee can be paid to the following account

Account Name: **PSG Institute of Advanced Studies**

Account Number: **1481412317**

IFSC Code: **CBIN0280913**

Bank Name: **Central Bank of India, Peelamedu, CBE.**

Last date for registration is 20th November 2022

FOR REGISTRATION CONTACT

Organizing Secretary

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Organizing Committee

- ❖ Mr. Nagarajan, rnn@psgias.ac.in, 9488487479
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