Aravind Kumar Rengan

Associate Professor , P-NAS Lab, Department of Biomedical Engineering

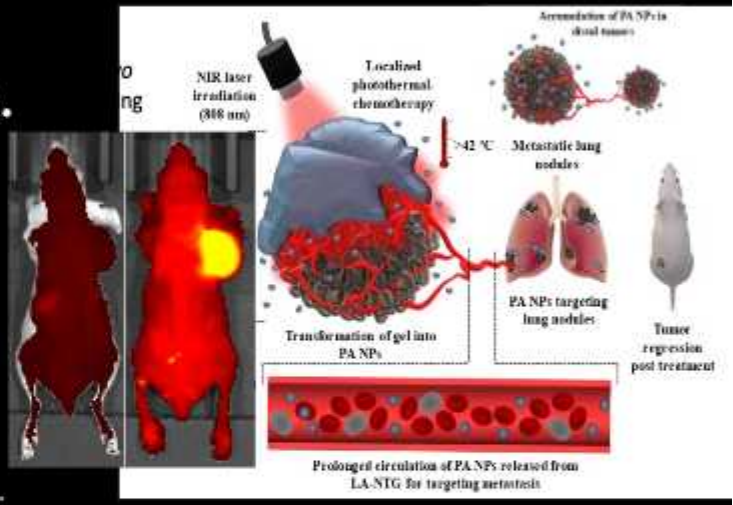
Room No. 205; Office Phone No.: 6106; Email: aravind@bme.iith.ac.in; www.pnaslab.com

Major Areas of Research/Up to 3 major sponsored projects

Bio-Nanotechnology & Nano-Theranostics.

Targeted Anti-Cancer/Anti-Microbial Nanomedicine.

Ionizing & Non-ionizing Radiation – Oncology.



Major Research Facilities in the Group

In-vivo Micro – CT.

In-vivo Optical Imaging System.

In-vivo Micro Irradiator.

Technology/Product Developed/Up to 3 most significant Publications

Tejaswini Appidi... A K Rengan* et al *Nanoscale*, 2022, 14, 9112.

Syed Alvi ... A K Rengan* et al ACS *Applied Materials and Interface*, 2021, 13, 47, 55862.

Rajalakshmi P .... A K Rengan* et al ACS

Biomacromolecules, 2021, 22, 3926.

భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
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Falguni Pati

Associate Professor, BioFabTE Lab, Department of Biomedical Engineering

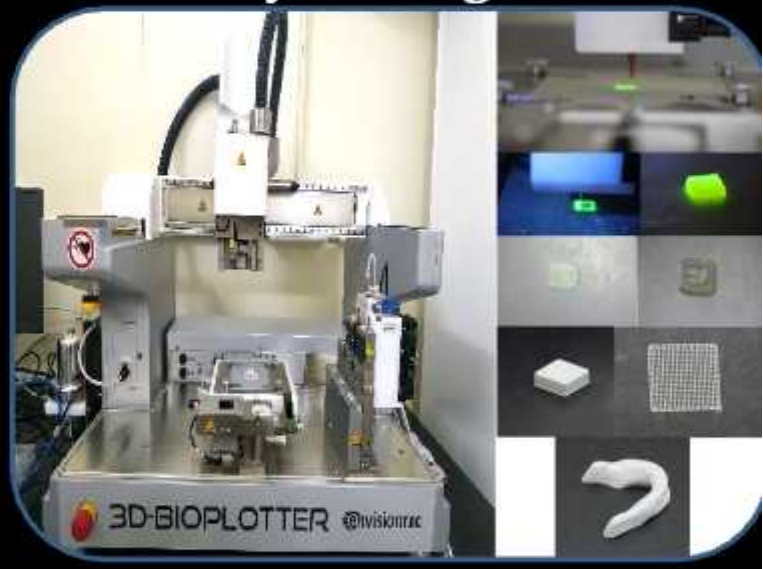
BTBM-204; 040-2301-6107; 8790935064; falguni@bme.iith.ac.in; https://biofablab-com.webnode.page/

Major Areas of Research/Up to 3 major sponsored projects

3D Bioprinting of Tissues and Organs for TERM
3D Bioprinted Cancer Models for Personalized Treatments
3D Bioprinted Micro-physiological Systems for Drug And Toxicity Testing

Major Research Facilities in the Group

Extrusion-based 3D Bioprinters (Image attached)
SLA 3D Printers
FDM 3D Printers
Rheometer
Cell culture facility



Technology/Product Developed/Up to 3 most significant Publications

3D Bioprinted Corneal Stroma for Partial Keratoplasty
Biomimetic Hydrogel for Treatment of Blinding Corneal Diseases
Tissue Specific Bioink for Bioprinting of Human Tissues and Organs
3D Printing of Novel Composite's Scaffolds for Cranio-Maxillofacial Reconstruction

Macromolecular Bioscience 2022:22(8);2200109
Biofabrication 2022:14(3);032002 ACS Applied Bio Materials 2020:4(1):533-544

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Harikrishnan Narayanan Unni

Associate Professor, Department of Biomedical Engineering

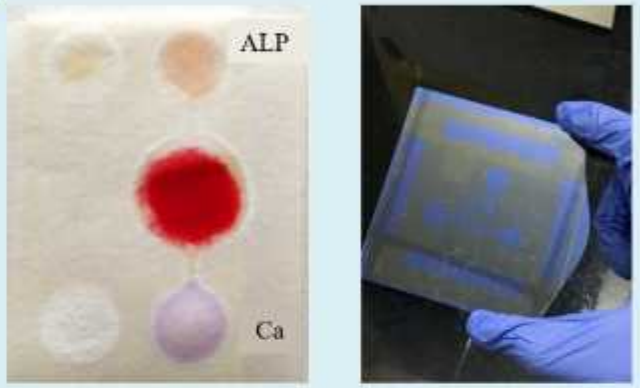
Room No: BTBM – 303, Office Phone No: 040-2301 6102, Institute Email: Harikrishnan@bme.iith.ac.in

Major Areas of Research

- Lab on Chip microfluidics for bioengineering
- Molecular modelling
- Computational Biomechanics

Major Research Facilities in the Group

- Microfabrication facility
- Inverted microscope
- High-end workstation



Paper based microfluidic designs and Digital microfluidic patterns

3 most significant Publications

Maneesha Shaji, Mudigunda Sushma, Tejaswini Appidi, Shubha Jain, Aravind Kumar Rangana, Harikrishnan Narayanan Unni, Microfluidic design of tumor vasculature and nanoparticle uptake by cancer cells, **Microfluidics and Nanofluidics**, 25 (46), 2021.

Shubha Jain, Sarpras Swain, Lopamudra Das, Sarita Swain, Lopamudra Giri, Anand Kumar Kondapi, Harikrishnan Narayanan Unni, Microfluidic protein imaging platform: Study of tau protein aggregation and Alzheimer's drug response, **MDPI Bioengineering**, 7(4), 162, 2020.

Manjoosha R. Yerrapragada and Harikrishnan Narayanan Unni, Paper based Microfluidic Device for diagnosis of Osteoporosis markers, **Bioanalysis**, 10 (20), 2018.

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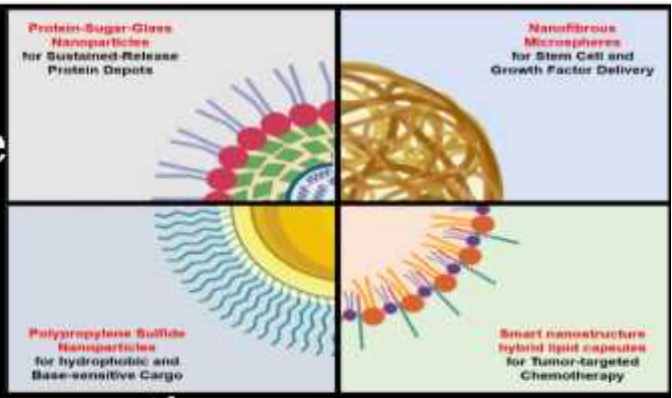
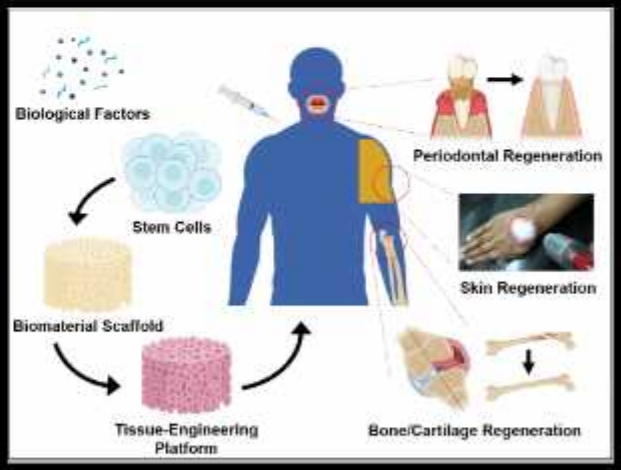
Jyotsnendu Giri,
Associate Professor, Biomaterials and Nanomedicine Lab,
Department of Biomedical Engineering, IIT Hyderabad
jgiri@bme.iith.ac.in ; enarmlab.com

Major Areas of Research



- Novel Biomaterials for Nanomedicine and Regenerative Medicine
- Stem Cell and Regenerative Medicine
- Nanomedicine, Nanotechnology for Therapeutic and Diagnostic
- Drug and Biomolecules Delivery

Major Research Facilities in the Group



- Cryo-Scanning Electron Microscopy
- Biomaterial Fabrication and Characterization Facilities
- Cell Culture and Characterization Facilities

Technology/Product Developed

- Affordable Burn Wound Patch At Patient Bedside For Burn Care
- DuroKea Technology: Affordable Long lasting Hygiene Product
- Nanocarrier for Drug and Gene Delivery

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Kousik Sarathy Sridharan

Assistant Professor, **neuroTech lab,** Department of **Biomedical Engineering**

Adj. Faculty, Heritage Science & Technology dept

Office Room No. BM304; ks@bme.iith.ac.in; https://sites.google.com/iith.ac.in/neurotechlab/home

Major Areas of Research/Up to 3 major sponsored projects

Haptic feedback & immersive experience (DST, PMRF)

Stroke rehabilitation & assessment framework (SERB)

Neuroscience and systems physiology of Hatha Yoga (DST)

Major Research Facilities in the Group

High-density Electroencephalography (HD-EEG)

Functional near-infrared spectroscopy (fNIRS)

High-density transcranial electrical stimulation (HD-tES

Technology/Product Developed/Up to 3 most significant Publications

Koppula A et al. Feasibility of home-based tracking of insulin resistance from vascular stiffness estimated from the photoplethysmographic finger pulse waveform. Physiol Meas. 2022 May 5.

Indigenous intra-operative neuromonitoring system – Technology

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Mohan Raghavan

Head & Associate Professor HST, Associate Professor **Biomedical Engineering**

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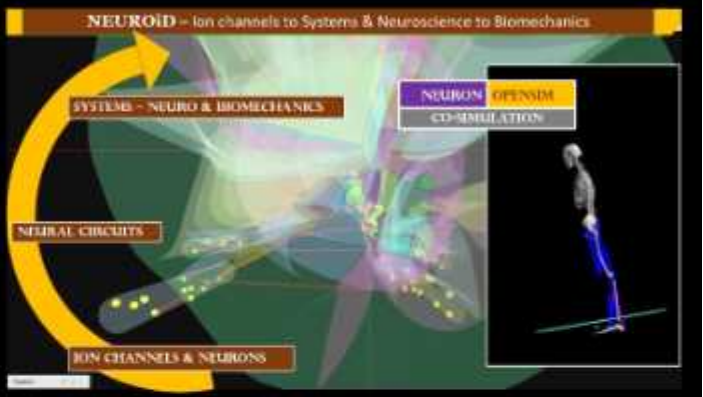
Major Areas of Research



- Computational Neuroscience
- Simulation and modeling of human movement
- Experiments in Human movement measurement
- ML models of movement understanding
- Heritage databases
- Neuroscience of Yoga

Major Research Facilities in the Group

- Human Gait and movement laboratory
- Compute clusters

Technology/Product Developed

NEUROiD – A spinal cord – musculoskeletal movement simulator

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Subha Narayan Rath

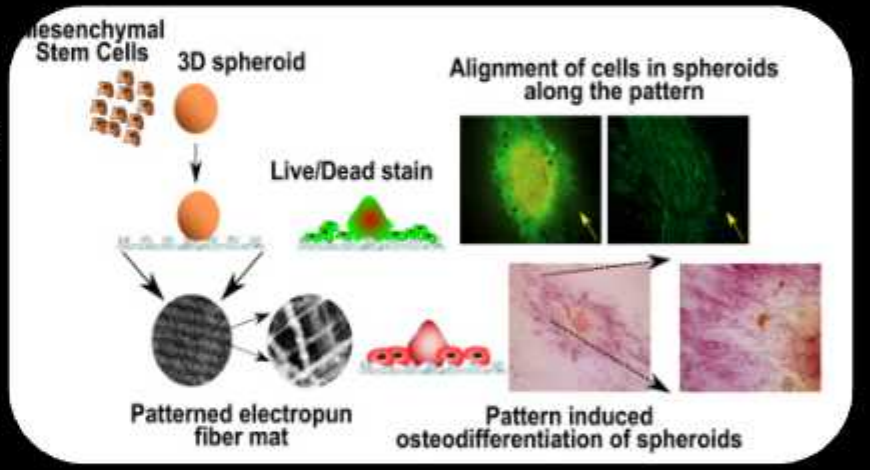
Professor

Regenerative medicine and stem cell lab, Department of Biomedical Engineerin

BM-203, +91 2301 6103, subharath@bme.iith.ac.in; Webpage: https://www.iith.ac.in/bme/subharath/

Major Areas of Research/Up to 3 major sponsored projects

1. 3D printed bone, cartilage and vessels using stem cells
2. Macroencapsulatoin device for diabetes
3. 3D printed microfluidic device for drug testing



Major Research Facilities in the Group

1. Primary stem cell culture facility
2. Bioreactors for mechanical stimulation
3. 3D bioprinting facility

Technology/Product Developed/Up to 3 most significant Publications

1. 3D printed bone for maxillofacial reconstruction
2. Microfluidic device for cancer cell-drug interaction studies
3. Electrospun device for allogenic islet cell therapy: details in link here

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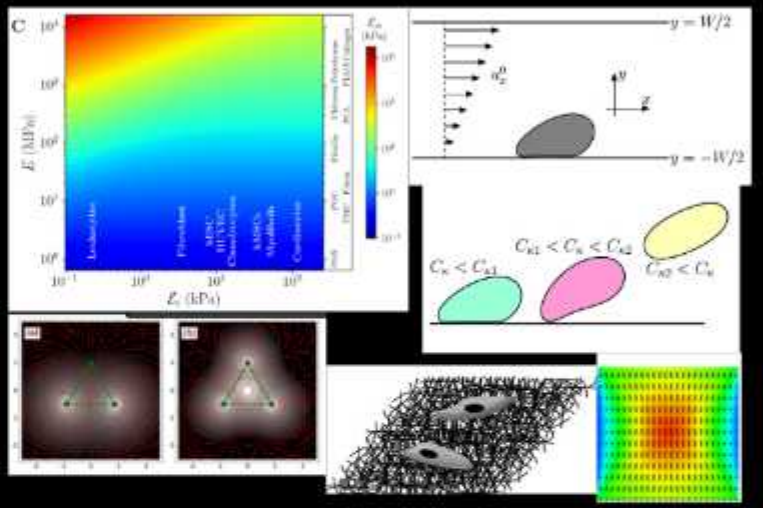
Mohd Suhail Rizvi

Assistant Professor, Comp Bio Lab, Department of Biomedical Engineering

BM305.; No office phone yet; suhailr@bme.iith.ac.in; https://people.iith.ac.in/suhailr

Major Areas of Research/Up to 3 major sponsored projects

- Constitutive modeling of tissues and their substitutes
- Modeling of gene networks and mechanics in embryonic development
- Biomechanics of cancer metastasis



Major Research Facilities in the Group

- High performance computing

Technology/Product Developed/Up to 3 most significant Publications

- Flow driven vesicle unbinding under mechanosensitive adhesion, Rizvi et al., 2022, Soft Matter
- A reduced model for a phoretic swimmer, Farutin et al., 2022, JFM
- Rheological signature of microswimmer phase-locking under flow, Rizvi et al., 2019, PR Fluids

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