



Faculty Development Program



VIT[®]
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Discussion Points

Title : Application of AI in Healthcare

Date : 2024-08-26 - 2024-08-30

Time : 10:00 - 17:30

Venue : MB 210

- Overview of AI in Healthcare
- Biases and fairness of AI in medical diagnosis
- Clinical Validation methods for Healthcare AI
- Brain Computer Interface
- Medical Image processing and segmentation
- Fusion for Medical Image Analysis and Deep Learning Applications
- AI in Bioinformatics
- Applications of AI in Cellular Imaging for improved Drug Discovery
- Biorobotics and Design
- Application of AI in the field of Regulatory Compliance of Medical Devices
- Overview and its fairness of AI in medical diagnosis
- Understanding the validation of AI in healthcare and Brain computer Interface
- Basics of Medical Image processing and segmentation
- Understanding the use of AI in Bioinformatics and cellular imaging
- Basics understanding of Bio robotics and regulatory compliance of medical devices

**Resource Person 1 - Details****Name :** Kamanasish Bhattacharjee**Designation :** Assistant Professor Sr. Grade 1, School of Computer Science and Engineering**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 2 - Details****Name :** Satarupa Banerjee**Designation :** Assistant Professor Grade 1, School of Bio Sciences and Technology**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 3 - Details****Name :** Kishor Lakshmi Narayanan**Designation :** Associate Professor Grade 1, School of Electronics Engineering**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 4 - Details****Name :** Dr Sushree S Behera**Designation :** Assistant Professor, IIIT Bangalore**University/ Company :** IIIT Bangalore, Bangalore**Address :** India, 560100.**Resource Person 5 - Details****Name :** Dr Denny John**Designation :** Professor, M S Ramaiah University of Applied Sciences**University/ Company :** M S Ramaiah University of Applied Sciences, Bangalore**Address :** India, 560054.**Resource Person 6 - Details****Name :** Dr Amit Mondal**Designation :** Clinical Team Lead, Stryker**University/ Company :** Stryker, Bangalore**Address :** India, 560066.**Resource Person 7 - Details****Name :** Dr Ramakanth Beesetty**Designation :** Sr Engineering Manager, Anthrex**University/ Company :** Anthrex, Hyderabad**Address :** India, 50008.**Resource Person 8 - Details****Name :** Dr Vijayarajan R**Designation :** Associate Professor, Centre for Healthcare**University/ Company :** VIT Chennai, Chennai**Address :** India, 600127.

**Resource Person 9 - Details****Name :** Eby John**Designation :** Application Manager, Revvity**University/ Company :** Revvity, Bangalore**Address :** India, 600113.**Resource Person 10 - Details****Name :** Dr K R Balakrishnan**Designation :** Chairman, Cardiac Services**University/ Company :** MGM Healthcare, Chennai**Address :** India, 600113.**Resource Person 11 - Details****Name :** Jitendra Singh**Designation :** Director Clinical Operations, Clinical Operations**University/ Company :** Jajal Medical Services, Bengaluru**Address :** India, 39007.

Resource Person's Profile :

1. Profile of Kamanasish Bhattacharjee

He received his Ph.D. in Computer Science and Engineering from Indian Institute of Technology Roorkee, India where he worked on the application of Nature-Inspired Optimization techniques for Machine Learning with emphasis on Weakly Supervised Learning. He primarily worked with healthcare data.

2. Profile of Satarupa Banerjee

PhD IIT Kharagpur, Computational Cancer Genomics, Cancer Biology, Functional Genomics, Translational Bioinformatics

3. Profile of Kishor Lakshmi Narayanan

PhD University of Wisconsin, Interests: Neuroscience, Virtual Reality, Machine Learning, Hand Rehabilitation

4. Profile of Dr Sushree S Behera

Dr. Sushree S. Behera received her Doctoral degree from the School of Electrical Sciences, Indian Institute of Technology Bhubaneswar where she worked in the area of Biometrics and Computer Vision using Deep Learning. Her research interests lie in the fields of Biometrics, Computer Vision, Medical Image Analysis, Deep Learning, and Machine Learning.

5. Profile of Dr Denny John

He has over 15 years in healthcare management, public health, health economics, evidence synthesis, and health technology assessment in various countries (e.g. India, Bangladesh, Nigeria, Sri Lanka, and the USA) through research, fieldworks, and consulting. He has been awarded several international and national grants from government and funding bodies.

6. Profile of Dr Amit Mondal

He has ten years of experience as a Clinical Specialist and Clinical Analyst in Diagnostic X-ray and Ultrasonography. Work experience of Human Factor Engineering (Usability Engineering), Risk Management, Post Market Surveillance, Verification and Validation for Diagnostic X-ray products.

7. Profile of Dr Ramakanth Beesetty

At Arthrex, leadership in engineering he innovates in AI, AR, and robotics for arthroscopic and orthopedic advancements. His recent focus has been on state-of-the-art technologies like SSM, generative AI, and reinforcement learning to push the boundaries of medical possibilities.

8. Profile of Dr Vijayarajan R

Research Area: Image Processing, Computer Vision, Medical Image Analysis

9. Profile of Eby John

Expert on high content screening and imaging systems.

10. Profile of Dr K R Balakrishnan

Dr. Balakrishnan is a Thoracic (Chest) Surgeon in Anna Nagar, Chennai and has an experience of 46 years in this field. Dr. Balakrishnan practices at MGM Healthcare in Anna Nagar, Chennai. He completed MBBS from University Of Madras, India in 1978, MS - General Surgery from All India Institute of Medical Sciences, New Delhi in 1980 and MCh - Thoracic Surgery from KEM Hospital, University of Bombay in 1982.

11. Profile of Jitendra Singh

His interests include 3D printing in medical field, Anatomical Models for pre-surgical understanding and better diagnosis.

The event will provide an overview of the application of AI in the field of Medical imaging and its analysis, Bioinformatics, cellular imaging, biorobots and regulations of medical devices.

Lecture and software demonstration

**Coordinator's: Prof. RAUNAK KUMAR DAS 13681 - Associate Professor Grade 1 -
CBCMT
Prof. MOHAN VARMA DAMU SESHADRI 14826 - Associate Professor
Grade 1 - CBCMT**