ABSTRACT

The big data era is well and truly underway and the deluge of data in biomedical imaging provides promising solutions for personalized medicine and computer-aided diagnosis. In this talk, we will cover a gamut of imaging modalities from microscopy to radiology, and corresponding challenging image analysis problems. We provide case studies across micro to macro scale biomedical imaging along with challenges that are successfully tackled with computational image processing, computer vision, and artificial intelligence (AI)-based techniques.

All are cordially invited

Prof. Shery Fernandez
The Head
Department of Mathematics
CUSAT

ABOUT THE SPEAKER

SURYA PRASATH

Surya Prasath, PhD, is a mathematician with more than two decades of experience in the research areas of image processing, computer vision and AI. He received his MSc, and PhD in mathematics from the Indian Institute of Technology Madras, India in 2004 and 2009. He was a Postdoctoral Fellow at the Department of Mathematics, University of Coimbra, Portugal from 2010 to 2011. From 2012 to 2015 he was with the Computational Imaging and VisAnalysis (CIVA) Lab at the Department of Computer Science, University of Missouri, USA as a Postdoctoral Fellow, and from 2016 to 2017 as an Assistant Professor. He is currently an Assistant Professor in the Division of Biomedical Informatics at the Cincinnati Children's Hospital Medical Center, and Departments of Biomedical Informatics, Pediatrics, Computer Science, at the University of Cincinnati from 2018. He had summer fellowships/visits at Kitware Inc. NY, USA, The Fields Institute, Canada, IPAM, University of California Los Angeles (UCLA), USA, and Duke University, USA.

His main research interests include applied mathematics, data science, image processing, computer vision, and machine learning with applications in various biomedical informatics domains. His current research focuses are in biomedical imaging informatics, and bioinformatics with AI/ML/DL techniques. His lab has over 100 publications in top-tier journals, conferences, such as Nature, Nature Communications, PLOS Computational Biology, Pediatric Research, IEEE Transactions on Image Processing, and more. He has received over $10M research fundings from NIH, NSF, CCRF, CFF, etc. He is committed to promoting STEMM and has mentored several high-school, undergraduate, and graduate students in the last 24 years.

DEPARTMENT OF MATHEMATICS

Cochin University of Science and Technology

SPECIAL LECTURE

on

"Leveraging Computational Mathematics and Artificial Intelligence for Biomedical Informatics Big Data"

by

Dr. Surya Prasath

Assistant Professor
Division of Biomedical Informaics
Department of Computer Science
University of Cincinnati, OH 45267 USA

14 JULY 2026

2:15 P.M.

AUDITORIUM,
DEPARTMENT OF MATHEMATICS