

SRIKANTH AVASARALA

(+91)9897207904 \diamond srikantha@iisc.ac.in

EDUCATION

Indian Institute of Science

M.Tech (Research) in Computational Science
Department of Computational and Data Science

July 2019 - present

Indian Institute of Technology, Roorkee

B.Tech Polymer Science and Engineering
Department of Chemical Engineering

2015 - 2019

CGPA: 8.2

RESEARCH INTERESTS

Stochastic dynamics, Data assimilation in dynamical systems, Probabilistic inference, Modeling and Simulation

PUBLICATION(S)

Design and fabrication of a transparent, tough and UVC screening material as a substitute for glass substrate in display devices.

Shankar, U., Oberoi, D., Avasarala, S. et al. J Mater Sci (2019) 54: 6684. <https://doi.org/10.1007/s10853-018-03285-8>

RESEARCH PROJECTS

Polymeric Nanoparticles for Drug delivery to Cancer cells (Bachelor's Thesis)

We have synthesized the nanoparticles of PLGA encapsulated Curcumin and Cisplatin combination of drugs by nanoprecipitation technique and carried out their physiochemical characterization followed by in-vitro action on DU-145 cells using MTT assay; morphology using AO-EB, DAPI, wound healing (Supervisor: Dr. Soumitra Satapathi, Department of Physics)

Duration: August 2018 - April 2019

Multiferroic properties of PVDF and Barium Hexaferrite Composites

We have synthesized and characterized the composites of PVDF and Barium Hexaferrite of varying compositions and characterized for their XRD, FESEM, VSM, Dielectric study and M-E coupling (Supervisor: Dr. K.L Yadav, Dept. of Physics) .

Duration: May 2018 - Nov 2018

Fabrication of novel electrode for Electrochromic device

We have synthesized and characterized the copolymer composition of PMMA-co-ACN in order to reduce the number of layers in a conventional Electrochromic device from 7 to 5.

(Supervisor: Dr. Anasuya Bandhyopadhyay, Dept. of Polymer and Processing)

Duration: May 2017 - July 2017

COURSE PROJECTS

Predicting conformational properties of Polyvinyl Alcohol using RIS-Monte Carlo technique (Course: Modelling and simulation of Polymers)

Using the basic principles of Rotational Isomeric states, we have made a python code to compute the conformational parameters of Polyvinyl Alcohol like Mean square end-to-end distance, Radius of gyration.

Cell segmentation in microscopy images using Thresholding and morphological operation (Course: Digital image processing)

Using scikit image library, we performed thresholding and morphological operation to count the number of cells in a microscopy image.

Correlation between age and happiness in adult samples using regression model and ANOVA (Course: Marketing research)

We surveyed the samples of diverse Indian adult population using a PANAS scale based questionnaire to measure the relative positive and negative psychology for different age groups and analyzed the data using Regression model and ANOVA.

TECHNICAL STRENGTHS

Modeling and Analysis

MATLAB R2018b

Software & Tools

Python 3.6, C++, Originpro 8.6, Latex

REFERENCES

Dr. Deepak Subramani

Assistant Professor

Department of Computational and Data science

IISc Bangalore

Dr. Soumitra Satapathi

Assistant Professor

Department of Physics

IIT Roorkee

Dr. Anasuya Bandyopadhyay

Assistant Professor

Department of Polymer and processing

IIT Roorkee