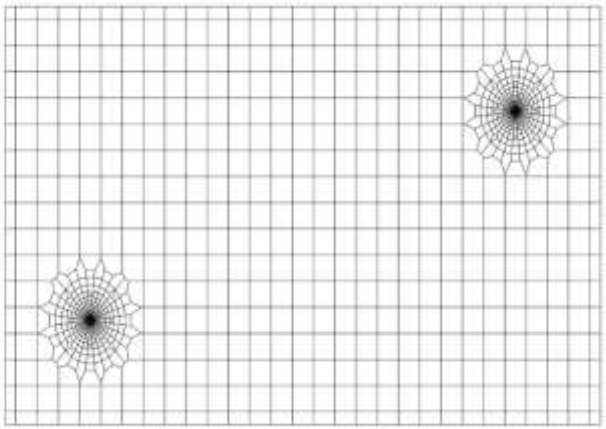
Prof. Tajinder Pal Singh

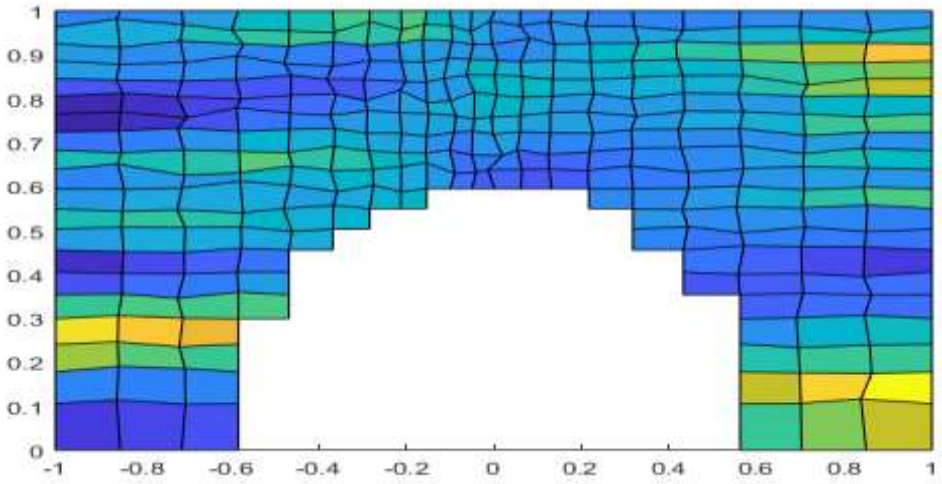
Professor and Director Academic Affairs, M.Sc., Ph.D. (Gujarat University, Ahmedabad)

Research Interests:

- Reservoir Simulation and Modeling
- Numerical Analysis
- Numerical Solutions of Differential Equations



Various kinds of unstructured grids based on Delaunay triangulations and Voronoi diagrams



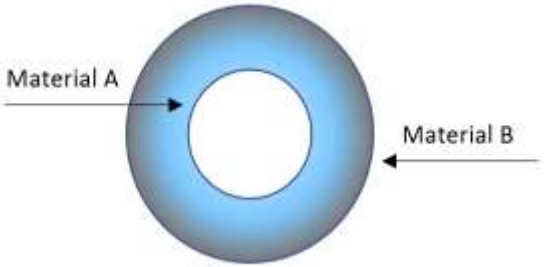
Construct of Cartesian and rectilinear grids for rectangular and non-rectangular domains and show how you can populate your grid with petrophysical properties.

Dr. Manoj Sahni

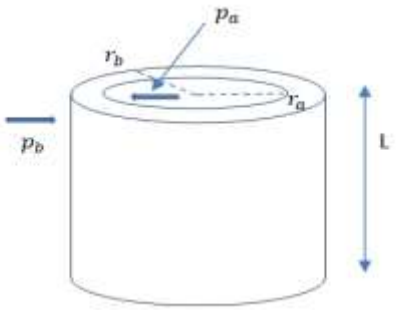
Associate Professor and Head, M.Sc., M.Phil., Ph.D. (JIIT, Noida)

Research Interests:

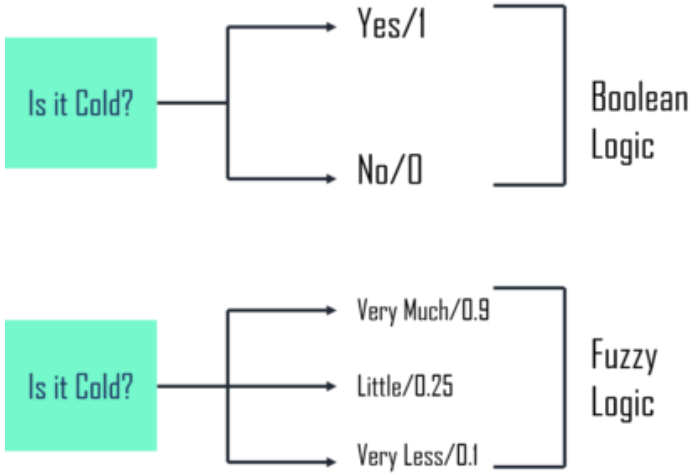
- Continuum Mechanics
- Functionally Graded Materials
- Fuzzy Sets
- Extensions of Fuzzy Sets
- Development of New Numerical Methods



Continuous graded structure of two materials



FGM Cylinder with pressure



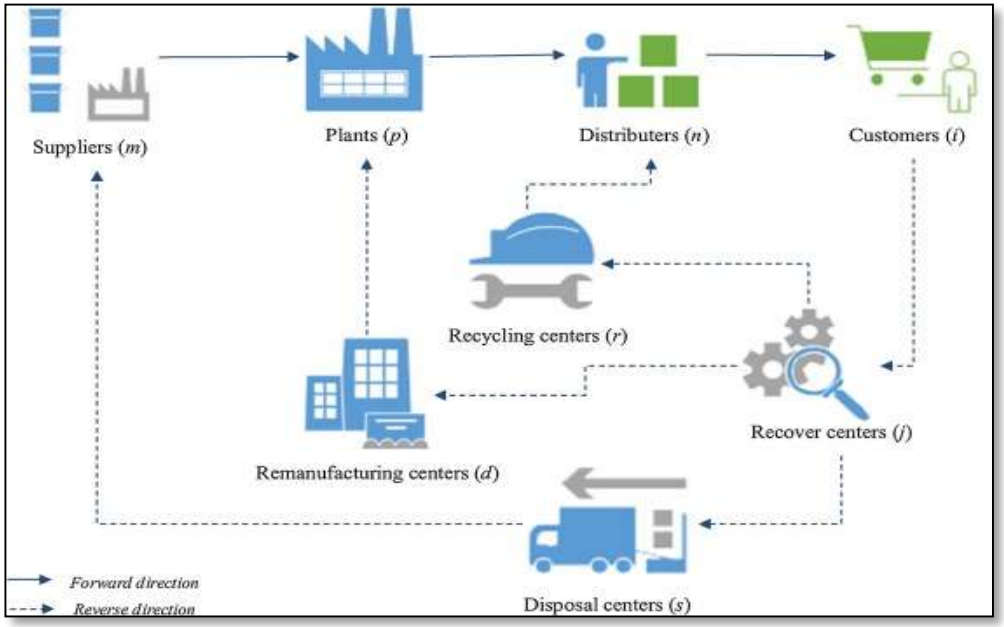
Fuzzy Logic

Dr. Poonam Mishra

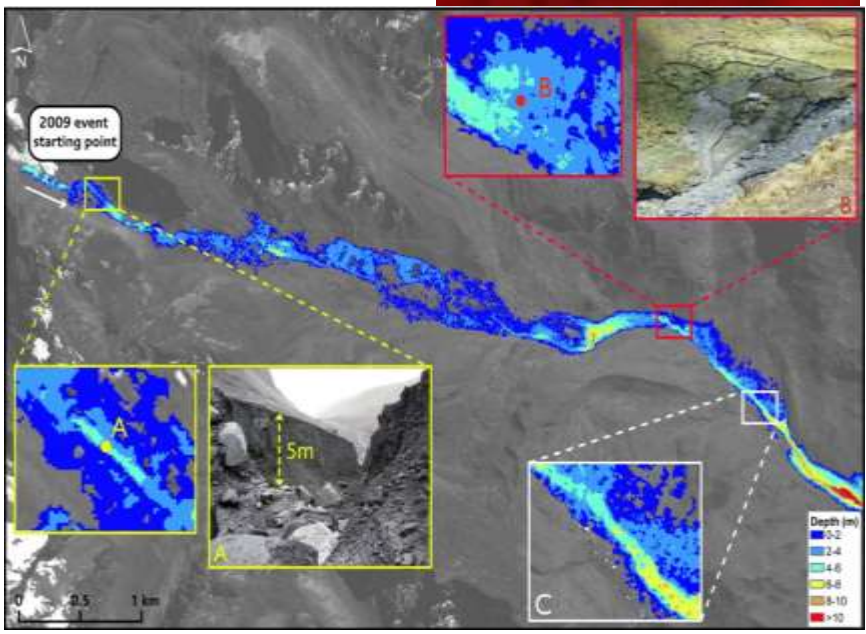
Associate Professor, MSc, PhD(Gujarat University, Ahmedabad)

Research Interests:

- Mathematical Modelling
- Models for inventory and supply chain optimization
- Stochastic optimization for multi-objective problems
- GLOF modelling



Multi – objective closed loop supply chain



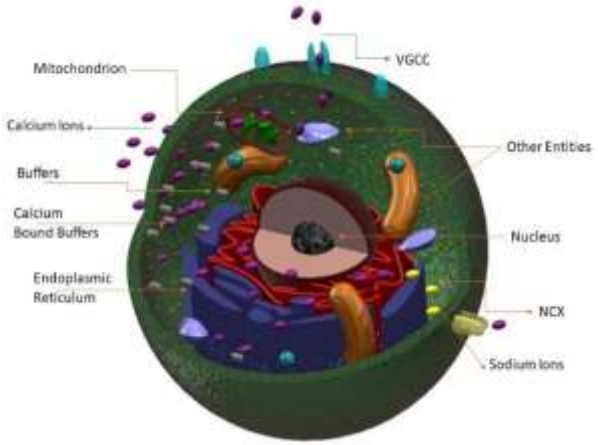
GLOF Modelling

Dr. Brajesh Kumar Jha

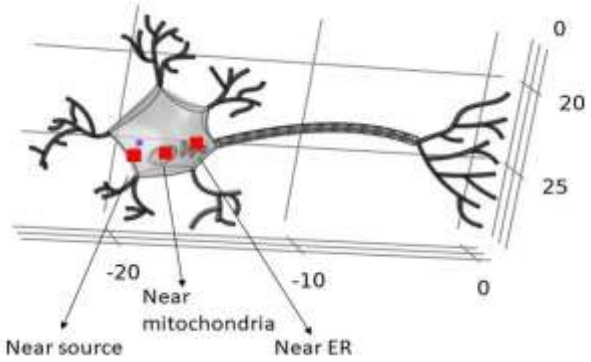
Associate Professor, M.Sc., Ph.D. (SVNIT, Surat)

Research Interests:

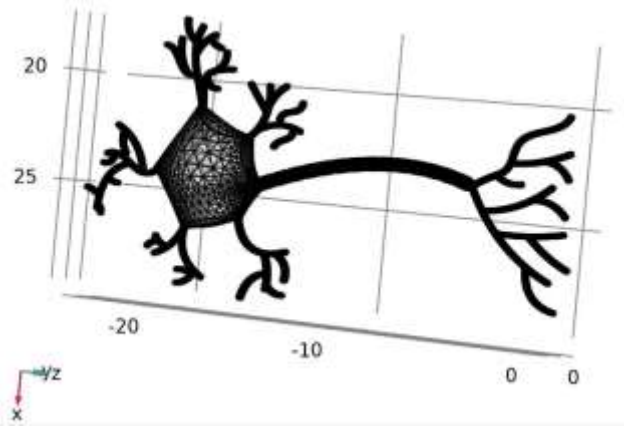
- Mathematical Neuroscience
- Mathematical Biology
- Fractional Differential Equations and its Application to Bioscience.
- Finite Element Modelling of Calcium Dynamics in Nerve Cell



Calcium dynamics in presence of buffer, VGCC, ER, NCX and mitochondria



Geometry of a typical neuron cell- The targeted domain and calcium in/efflux via VGCC and NCX



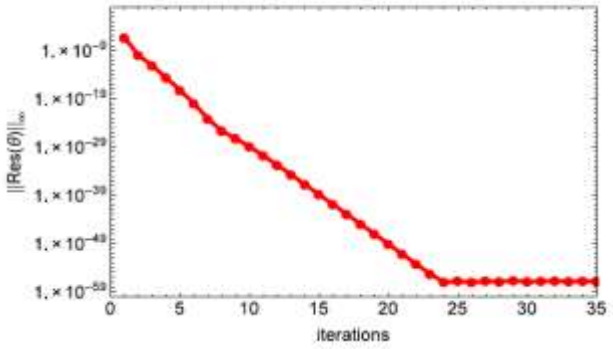
Meshing of the neuron

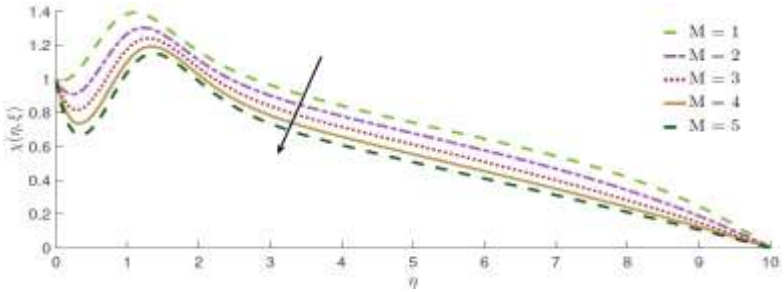
Dr. Md S Ansari

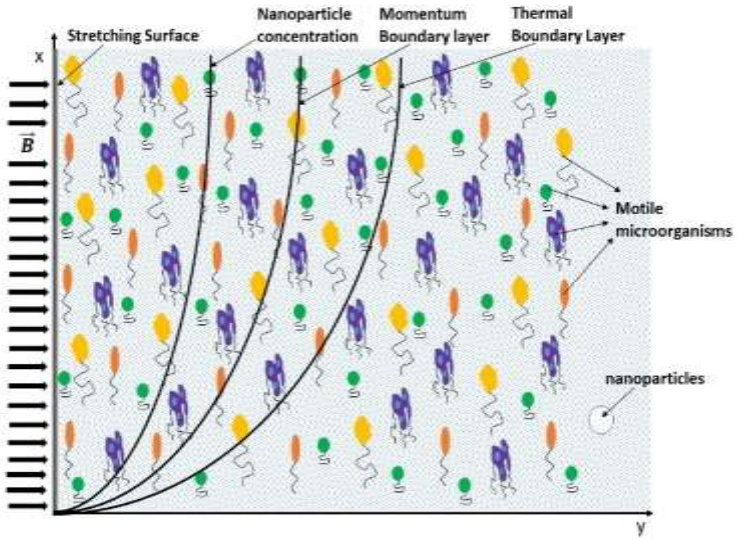
Assistant Professor, (Ph.D., IIT (ISM) Dhanbad)

Research Interests :

- Magnetohydrodynamic boundary layer flow
- Heat and mass transfer
- Developing the numerical techniques for solving the equations arising in modeling of boundary layer problems







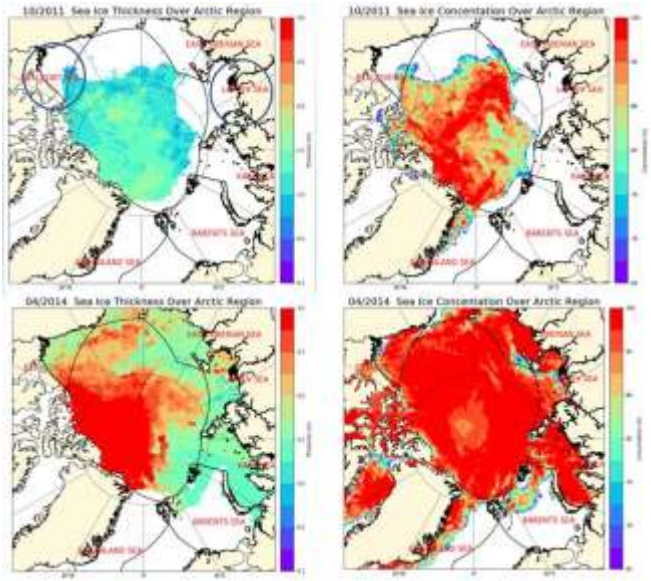
Schematic flow diagram

Dr. Bhasha H. Vachharajani

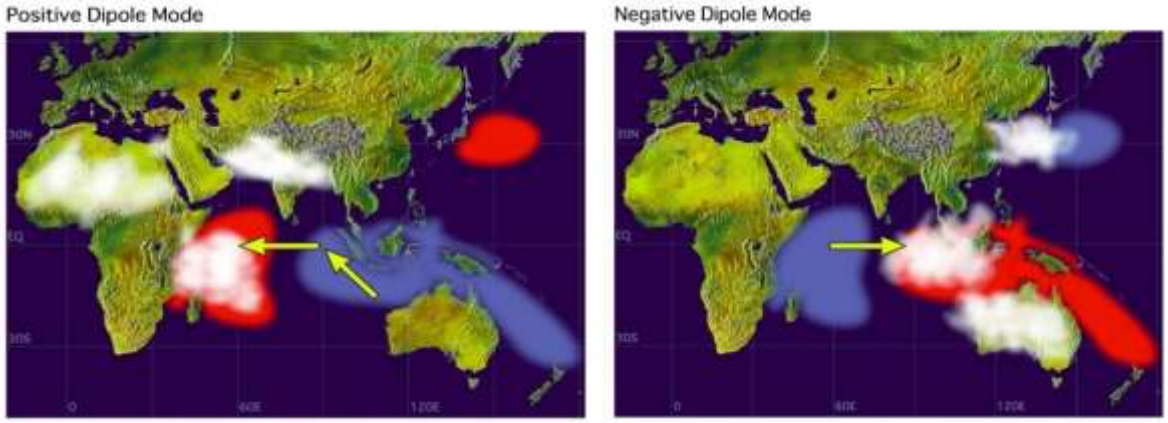
Assistant Professor, Ph.D.(Gujarat University, Ahmedabad)

Research Interests:

- Ocean Modelling
- Sea-ice dynamics
- Warm pool
- Indian Ocean Dipole



Sea ice thickness over Arctic region



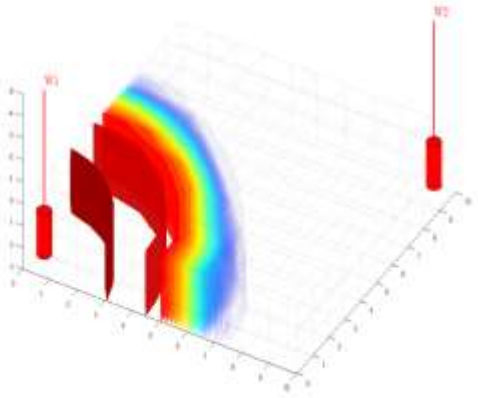
Schematic of Indian Ocean Dipole

Dr. Jwngsar Brahma

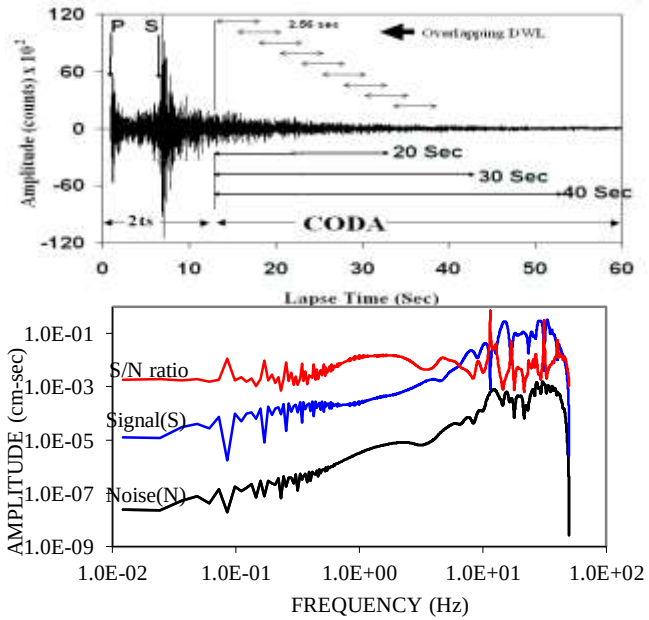
Assistant Professor, M.Sc., M.Tech., Ph.D.(PDEU, Gandhinagar)

Research Interests:

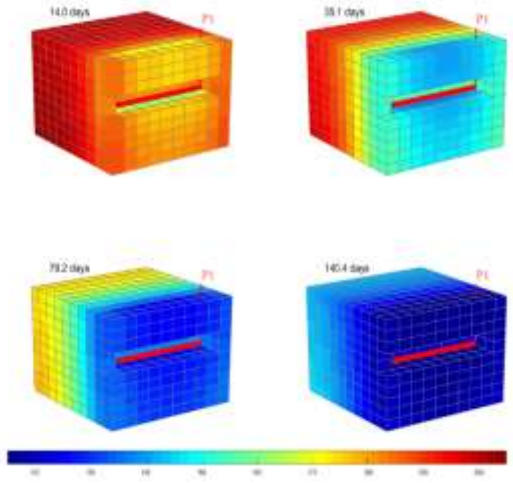
- Computational Seismology
- Reservoir Simulation and Modeling
- Drilling Engineering in Geomechanics
- Prediction of Pore Pressure
- Design of Safe Well in High Pressure and Temperature Reservoir



Pressure Distribution in Petroleum Reservoir



Seismic Wave Analysis using Signal Processing



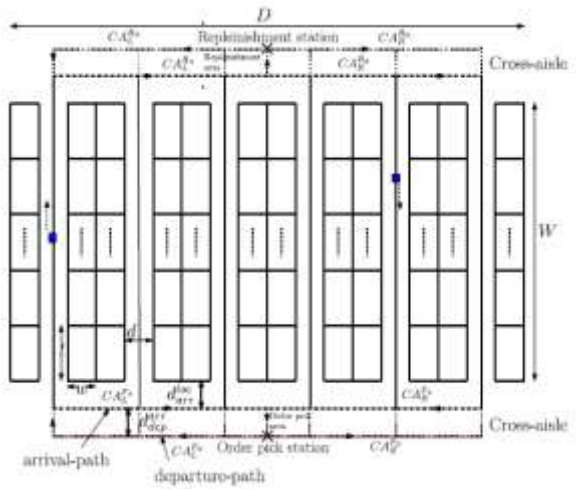
Reservoir Pressure Distribution with Production rate

Dr. Shobhit Nigam

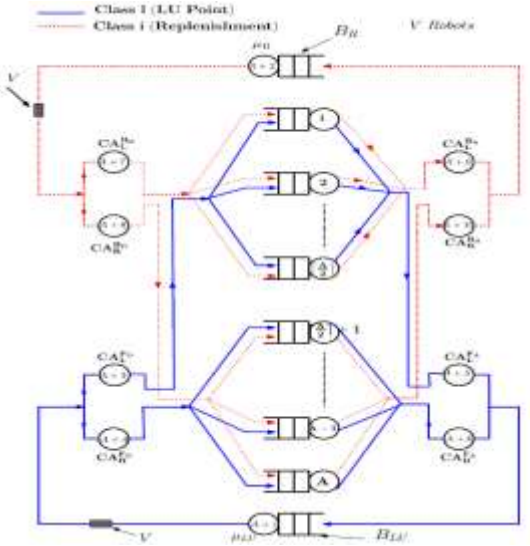
Assistant Professor, M.Sc., Ph.D.(IIT (ISM) Dhanbad)

Research Interests:

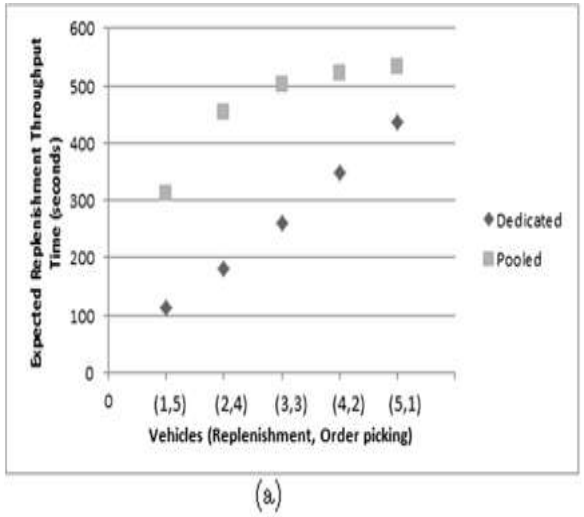
- Mathematical Modeling in Automated Warehouse Systems
- Optimization
- Predictive Modeling
- Financial Forecasting
- Machine Learning Techniques



Layout of a Warehouse



Queuing Network model for Mobile Fulfillment System



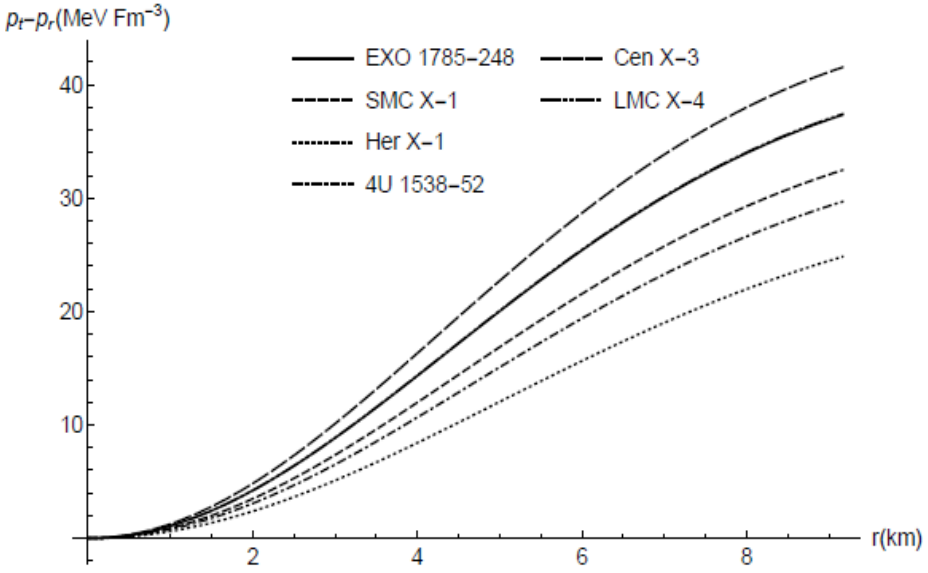
Expected Replenishment throughput times

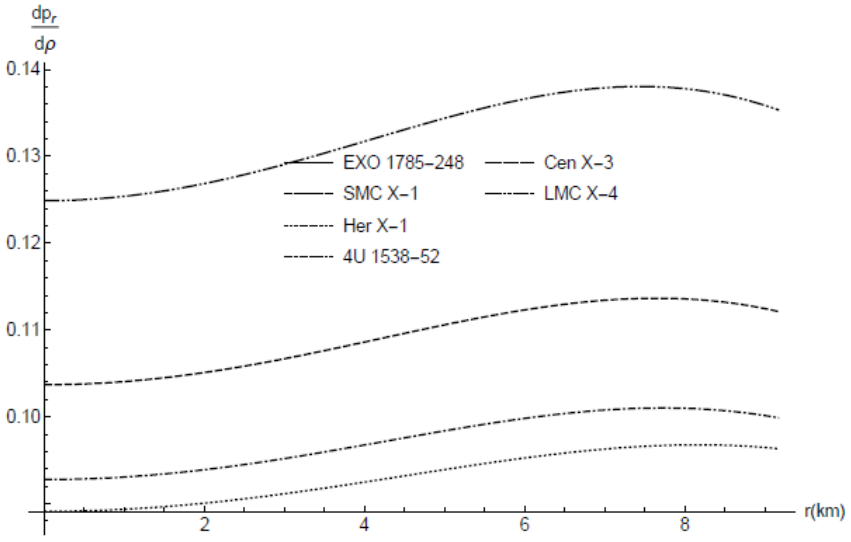
Dr. Dishant M. Pandya

Assistant Professor, M.Sc., M.Phil, Ph.D.(MSU, Baroda)

Research Interests:

- Einstein's field equations
- Applied Mathematics and Mathematical Modeling
- Relativity Theory



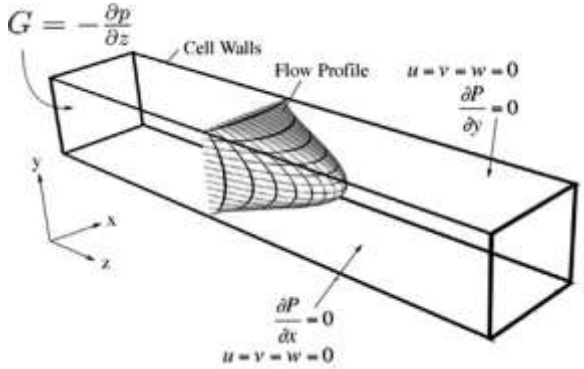


Dr. Ankush Raje

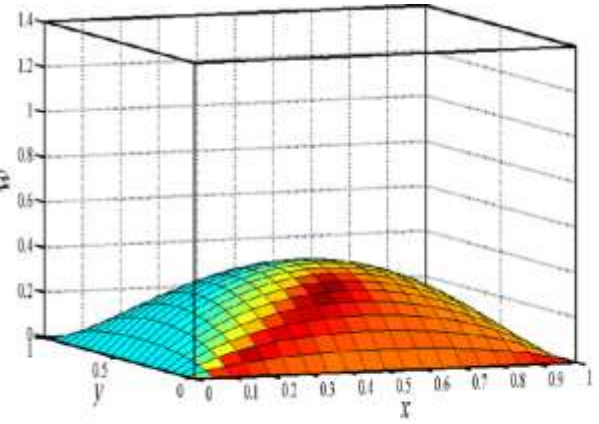
Assistant Professor, M.Sc. Ph.D. (VNIT Nagpur)

Research Interests:

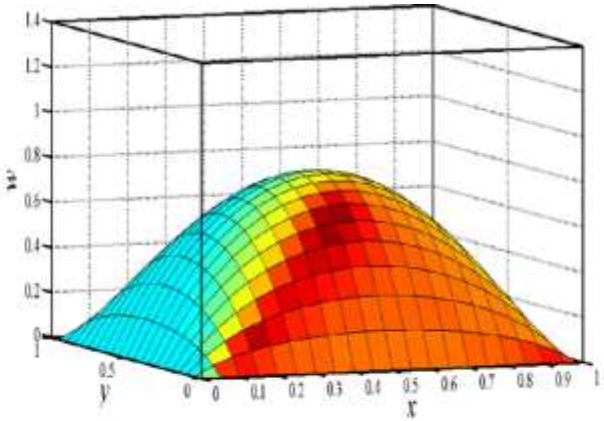
- Fluid Mechanics,
- non-Newtonian fluids,
- Heat transfer.



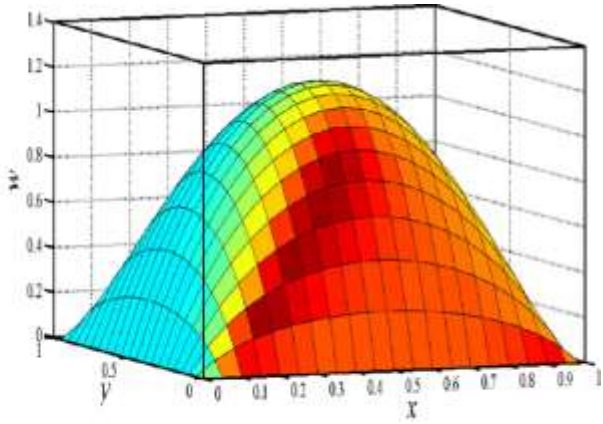
Physical sketch of the fluid flow



(a)



(b)



(c)

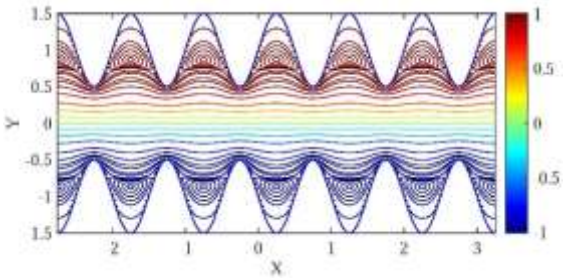
Fluid velocity profiles

Dr. Chandra Shekhar Nishad

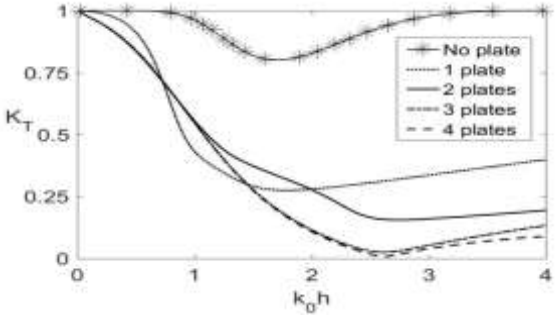
Assistant Professor, M.Sc., M.Tech., Ph.D. (IIT Kharagpur)

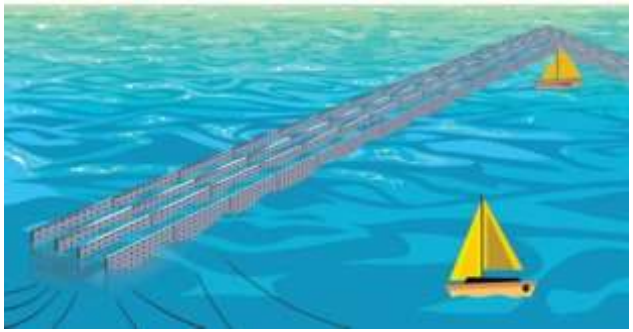
Research Interests:

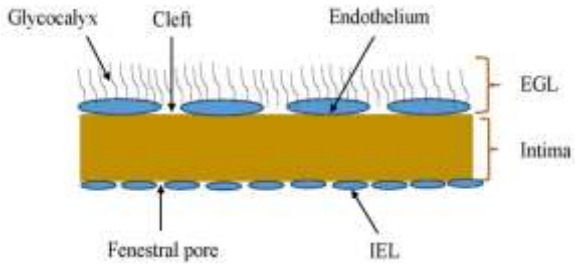
- Computational Fluid Dynamics
- Coastal Engineering
- Liquid Sloshing Dynamics
- Renewable Energy



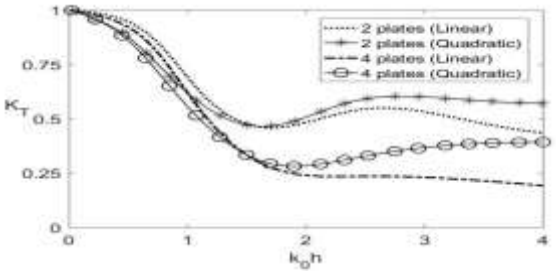
Streamline in porous wavy channel



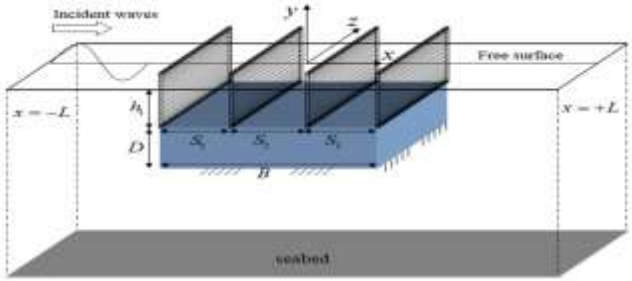




Modelling flow inside different glycocalyx layers in blood vessels in human artery



Transmission coefficient vs wave height



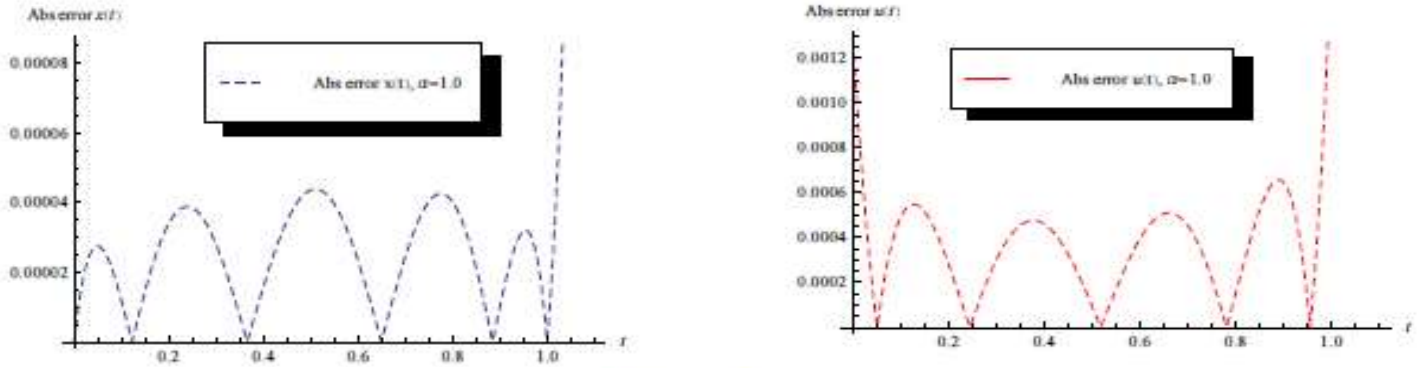
Gravity Wave Interaction With a Wave Attenuating System

Dr. Neelam Singha

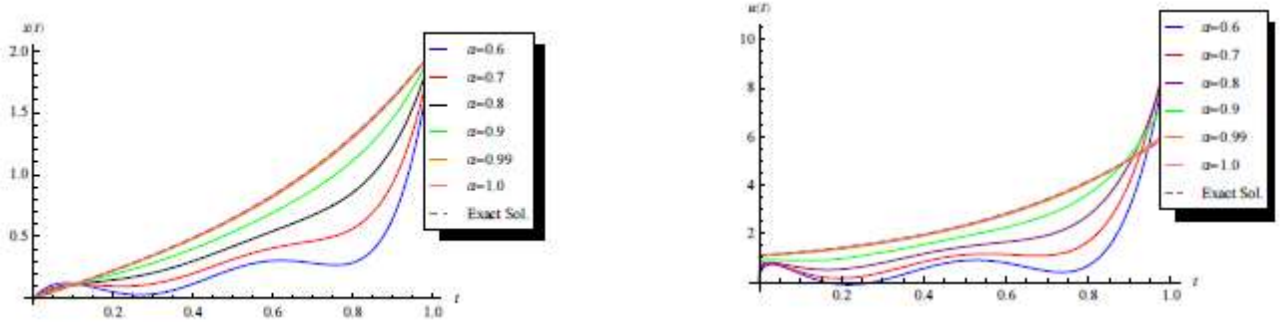
Assistant Professor, M.Sc., Ph.D. (IIT Kharagpur)

Research Interests:

- Fractional Calculus
- Fractional Variational and Optimal Control problems
- Convex functions



The absolute error function of the state and control variable, as a function of time t

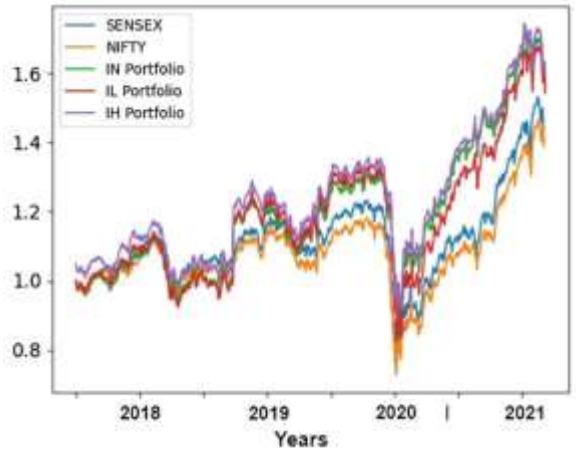


Dr. Pritam Kocherlakota

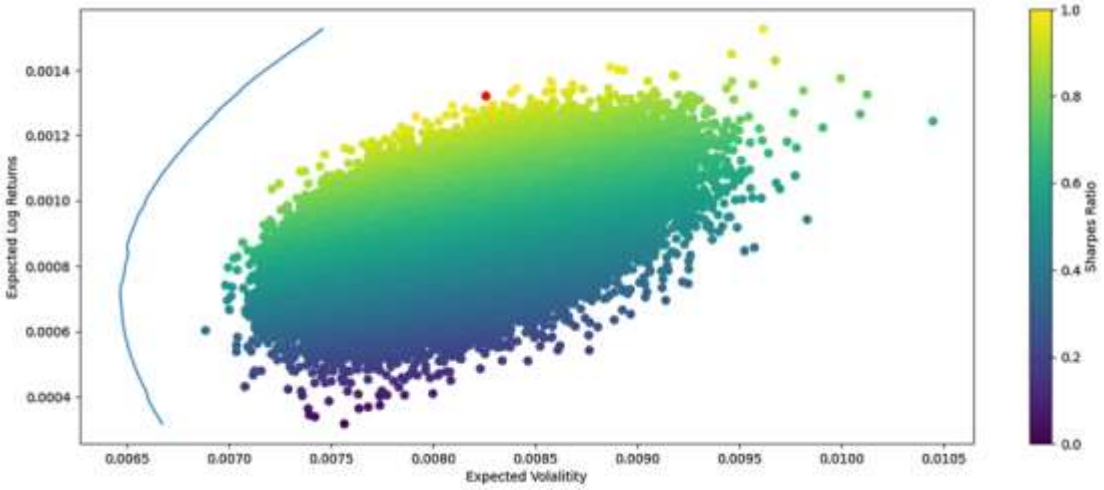
Assistant Professor, M.Sc., Ph.D.(BITS Pilani)

Research Interests:

- Financial Modelling
- Risk Management
- Fractional Calculus in Sustainable and Renewable Energy



Comparison of perception based portfolios returns with BSE SENSEX and Nifty



Markowitz efficient frontier