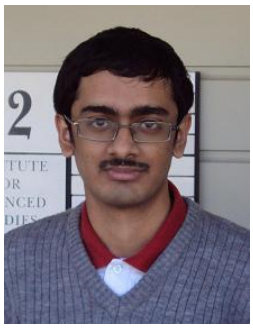

Sathej Gopalakrishnan

University of Potsdam
Institute of Mathematics
Science Park Golm
Karl-Liebknecht-Str. 24/25
D-14476 Potsdam Golm
email: sathej@uni-potsdam.de
(mailto:sathej@uni-potsdam.de)
Phone: +49 (0)331 / 977 5882
Fax: +49 (0)331 / 977 1045

Research Interests

My interests are diverse and range from Pharmacometrics to Acoustics. Much of my work until now has been on developing mathematical and computational models for systems that interest me.
During my undergraduation, I worked with Dr Ronojoy Adhikari at The Institute of Mathematical Sciences on Numerical simulations of composite membrane vibrations in Indian percussion instruments. The work primarily involved solving a generalized eigenvalue problem using a Fourier-Chebyshev spectral collocation method. I also worked for a short period on Stochastic models in epidemiology under Dr Adhikari during my final year of undergraduation.
During the summer of my Third Year, I worked under the tutelage of Professor Paul Rainey at the New Zealand Institute for Advanced Study, Massey University, Auckland. The work involved constructing models and simulations of the biofilm (mat) formed by the Wrinkly Spreader (WS) mutant of the SBW25 strain of Pseudomonas fluorescens. The challenge lay in implementing random diffusion of different sized and different shaped objects in three dimensional space using Monte Carlo methods on a MATLAB platform.
My final year Undergraduate dissertation was under the mentorship of Dr Sanjib Senapati at IIT Madras. The broad area of the work consisted of studying inhibition of Cyclin Dependent Kinases by computational tools such as Quantitaive Structure Activity Relationships (QSAR), Docking studies and examining kinetic models.

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