

Divya Variganji

Curriculum Vitae

Personal Information

First name: Divya
Last name: Variganji
Age and Date of birth: 32 years, 5th August 1992
Gender and MaritalStatus: Female, Single
Nationality: Indian
Permanent Address: D-No:5-34/1, Uppaneela tank centre, Gannavaram, Krishna District, Andhra Pradesh, India, PIN-521101, Email: sacasstmanager@gmail.com

Academic Details

Class 10: Sravanti high school, Gannavaram, Andhra Pradesh
Percentage obtained: 93.3
Class 12: Nalanda girls junior college, Vijayawada, Andhra Pradesh
Percentage obtained: 96.3
2009-2014: Integrated BS-MS, Mathematics as major and Biology as minor, Indian Institute of Science Education and Research, Thiruvananthapuram, Kerala, India
CGPA: 6.97

Undergraduate Course Details

In first two years

Mathematics: Real Analysis, Linear Algebra, Complex Analysis, Probability and statistics
Physics Classical Mechanics, Electrodynamics, Quantum mechanics, Statistical mechanics
Biology Cell Biology, Biochemistry, Ecology and Evolution, Genetics
Chemistry: Inorganic Chemistry, Reaction mechanisms and Chemical kinetics, Organic Chemistry, Physical Chemistry
Interdisciplinary: Scientific Computing (Matlab), Thermodynamics, Electronics, Quantum chemistry

Practical: Practical courses were taken for all Physics, Chemistry, Biology courses in their respective semesters

Major Courses (Next 2 years)

Advanced real analysis, Abstract algebra, Ordinary differential equations, Programming and data structures, Discrete mathematics, Advanced complex analysis, Measure theory and integration, Numerical analysis, Commutative algebra, Linear algebra, Functional analysis, Linear programming, probability theory, Number theory, Topology, Algebraic geometry, Advanced analysis, Partial differential equations, Differential geometry, Mathematical Finance, Combinatorics and graph theory, Computational methods for partial differential equations

Minor Courses

Genomics, Systematics and physiology and Immunology

Research interests

- 1 Analytic study of Navier-Stokes Equations.
- 2 Control Theory that arise from ordinary and partial differential equations
- 3 Analysis.

Masters Thesis (Final Year)

Title: *Analysis of shell model of turbulence*

Supervisor: **Dr Dharmatti Sheetal**

Indian Institute of Science Education and Research, Thiruvananthapuram

Duration: August 2013-April 2014

Description: The aim of the project was to study the shell model of turbulence and its abstract formulation. Studied the existence and global regularity of shell model in $C([0,T],H)$ where H is a appropriate Hilbert space. Our further aim is to study and analyze stability of this problem with control in the domain of the problem.

Research Experience (during 4th year)

Minor Project

Supervisor: **Dr. Tapas K Manna**

Indian Institute of Science Education and Research, Thiruvananthapuram

Duration: January 2013-April 2013

Title: **Analysis of cytotoxic potential of CIL-102 against cervical vs. breast cancer cells.**

Description: Analysed the cytotoxicity of CIL-102 in cervical cancer cell line HeLa and compared with breast cancer cell line MCF-7 and non-tumor cell line HEK-293. The cytotoxicity of CIL-102 was studied through two parameters, the half maximal inhibitory concentration (IC50 value) and the percentage of apoptosis in these cell lines. CIL-102 inhibited proliferation of HeLa cells and induced apoptosis. However, this was less effective against HeLa cells than in breast cancer cells. Also found that CIL-102 inhibited proliferation of HEK-293 cells but no apoptosis was induced in these cells.

Summer Research

Supervisor: **Dr. G. Nanaji Rao**

Andhra University, Vishakapatnam

Duration: May 2011-June 2011

Title: **Graphs, Trees and Spanning trees**

Scholarships

2009-2014 *INSPIRE* Fellowship

Participation in workshops

03-03-2012 *Mathematics symposium consisting of four talks (generic level) and panel discussions on Research Opportunities in Mathematics.*

- 1 Talk by Professor Alladi Sitaram (IISc Bangalore) on Fourier series and the isoperimetric problem
- 2 Talk by Professor R Balasubramanian (IMSc Chennai)
- 3 Panel Discussion on Research Opportunities in Mathematics
- 4 Talk by Professor G Rangarajan (IISc Bangalore). Title - Chaos, Synchronization and Extinction of Species
- 5 Talk by Professor S Ramasubramanian (ISI Bangalore) on Mathematical aspects of some insurance models

12-03-2012 *workshop on algebraic geometry*

Programming

Basic: Mathematica

Intermediate: C, MATLAB, \LaTeX

Job

Working in Secretariat,
Government of Andhra Pradesh

Languages

Mothertongue **Telugu**

Intermediate **English**

Basic **Hindi, Sanskrit**

Con conversationally fluent

Basic words and phrases only

Interests

Reading books and newspaper

Listening to music

Painting

