

CURRICULUM VITAE

MEENAKSHI NEROLU

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SKILLS

- Computer Programming: Python, R Studio, Tableau, Open Refine, C, C++, Matlab, Mathematica, Scilab, Origin, Maxima
- Computer Basic Skills: Microsoft Windows, MS-Office, Latex, Latex beamer
- Mathematical Modeling
- Data Cleaning, Data Visualization

EXPERIENCE

- 01/2020 - Current
Department of Mathematics,
College of Arts and Sciences
Howard University, Washington DC
Lecturer
Teaching Calculus I and College Algebra II.
- 01/2019 - Current
Department of Mathematics,
College of Arts and Sciences
Howard University, Washington DC
Visiting Postdoc
 - Working on dynamics of soliton-like excitation in real DNA chains. These problems involve large set of ODE systems.**IT and Marketing Analyst**
 - Promoting a new genomic test, BBDRisk Dx for Breast Atypical Hyperplasia through media campaigns and hospital visits in USA.
 - Executed successful product introductions using social media and public relations.
- 09/2018 – 01/2020
Silbiotech, Inc. Gaithersburg, MD
Assistant Professor
 - Taught Engineering Mathematics to undergraduate students.
- 01/2016 - 01/2017
M. S. Ramaiah University of Applied
Science, Bangalore, India
Research Scholar
- 01/2012 - 01/2016
Bangalore University, Bangalore, Karnataka
Lab Assistant
 - Taught Free Open Source Software (FOSS) viz., Scilab, Maxima, Python
- 01/2012 - 01/2015
Bangalore University, Bangalore, Karnataka
Lecturer
 - Taught Engineering Mathematics to undergraduate students.
- 08/2011 - 08/2012
Dayananda Sagar College of Arts, Science
and Commerce, Bangalore, Karnataka, India

EDUCATION AND TRAINING

- 2017
India **Ph.D** in Applied Mathematics
Bangalore University
- 2011
India **Master of Science (M.Sc)** in Mathematics
Bangalore University

Received gold medal for securing highest score in Mathematical Methods and Numerical analysis in M.Sc. (Mathematics), Bangalore University, Karnataka, India.
- 2009
India **Bachelor of Science (B.Sc.)** in Physics, Mathematics and Computer Science
Mangalore University

ACTIVITIES AND HONORS

- Junior Research Fellowship (2012-2016), Department of Science and Technology (DST) –under Promotion of University Research and Scientific Excellence (PURSE), New Delhi, India.
- Selected to attend Summer School on “Fluid Dynamics of Sustainability and the Environment” held at Ecole Polytechnique, Paris, France in association with Cambridge University, September 2015
- Elected as Life Member (2013) of Indian Society of Theoretical and Applied Mechanics (ISTAM), Indian Institute of Technology (IIT), Kharagpur, India.
- Young Scientist Award at the 57th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM) during December 2012 at the Defense Institute of Advanced Technology, Pune, Maharashtra, India.
- Actively conducted workshop on Free Open Source Software (FOSS) for Faculties at Bangalore University.

PUBLICATIONS

- P. G. Siddheshwar and N. Meenakshi, 2019, “Comparison of the effects of three types of time-periodic body force on linear and non-linear stability of convection in nanoliquids”, *European Journal of Mechanics-B/Fluids*, 77, pp. 221-229.
- P. G. Siddheshwar, N. Meenakshi and **Igor Pažanin**, 2017, “Flow and heat transfer in a Newtonian nanoliquid due to a curved stretching sheet”, *Zeitschrift für Naturforschung A (ZNA)*, 72 (9) pp. 833-842.
- P. G. Siddheshwar and N. Meenakshi, 2017, “A theoretical study of enhanced heat transfer in nanoliquids with volumetric heat source”, *Journal of Applied Mathematics and Computing*, doi 10.1007/s12190-017-1129-9, pp. 1-26.
- P. G. Siddheshwar and N. Meenakshi, 2016, “Effects of suction and free stream velocity on hydromagnetic flow and heat transfer in a Newtonian fluid due to a stretching sheet”, *ASME Journal of Heat Transfer*, 138 (9), pp. 1-4, doi: 10.1115/1.4033460.
- P. G. Siddheshwar and N. Meenakshi, 2015, “Amplitude equation and heat transport for Rayleigh-Benard convection in Newtonian liquids with nanoparticles”, *International Journal of Applied and Computational Mathematics (Springer)*, Vol. 2, pp. 1-22, doi:10.1007/s40819-015-0106-y.
- P. G. Siddheshwar, N. Meenakshi, **Y. Kakimoto** and **A. Nakayama**, 2016, “Study of heat transport in Newtonian water-based nanoliquids using single-phase model and Ginzburg-Landau approach”, Bangalore, Vignana Bharathi, ISSN No.:0971-6882, 1 (2), pp. 76-92.
- P. G. Siddheshwar and N. Meenakshi, 2014, “Hydromagnetic forced flow of a Newtonian, Electrically conducting fluid due to a curved stretching surface”, *Proceedings of International Conference on Emerging Trends in Computational and Applied Mathematics (ICCAM-2014)*, ISBN:978-93-81212-7-9, pp. 343-347.

INVITED TALKS

- **Regulatory mechanisms for Rayleigh-Benard convection in nanoliquids: A survey**, International conference on “Fluid Dynamics and Its Applications” held at B. N. M. Institute of Technology, Bengaluru, India, July 2017.

- **Two days workshop on Scilab and Maxima (FOSS)**, M.E.S. Degree College of Arts, Commerce and Science, Malleshwaram, Bengaluru, India, July 2015.
- **Two days workshop on Mathematics Practicals (using FOSS tools)**, Bangalore University Mathematics Teachers Form, January 2015.
- **Towards a New Curriculum in Engineering Mathematics with Scilab & Maxima**, Jyothy Institute of Technology, Bangalore, India, December 2014.
- **National workshop on Scilab and Maxima software**, Oxford College of Science, Bangalore, India, November 2012.

SEMINARS/WORKSHOPS ATTENDED

- **Workshop on Dynamical Systems and Related Topics**, University of Maryland, College Park, USA, April 2018.
- Two-week International workshop on **Computational Fluid Dynamics** organized by Department of Mathematics, BMS College of Engineering, Bangalore, India, June 2014.
- Two-day Science Academies' Lecture Workshop on **Mathematical Modelling using Differential Equations** held at Department of Mathematics, Maharani's Science College for women, India, in association with Central College Mathematical Society Bangalore University, March 2014.
- **Conference on Differential Geometry** held at the Department of Mathematics, Bangalore University, Central College Campus, Bangalore, India, July 2013.
- **National workshop on Scilab and Maxima software**, The Oxford College of Science, Bangalore, India, November 2012.
- Four-day National workshop on **Recent Trends in Bio-Mathematics and Statistics** at Apaji Institute of Mathematics and Applied Computer Technology, Centre for Mathematical Sciences (CMS), Banasthali University, Jaipur, India, November 2012.

PAPERS PRESENTED

- *Effect of time-periodic vertical oscillations of the Rayleigh-Benard system on onset of convection in Newtonian Nanoliquids*, 60th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2015), Jaipur, India, December 2015.
- *Steady finite amplitude Rayleigh-Benard convection in Newtonian nanoliquids with volumetric heat source*, 23rd International Conference of Forum for Interdisciplinary Mathematics (FIM) on "Interdisciplinary Mathematical, Statistical and Computational Techniques (IMSCT)-2014, Surathkal, Karnataka, India, December 2014.
- *Hydromagnetic forced flow of a Newtonian electrically conducting fluid due to a curved stretching surface*, International Conference on Emerging Trends in Computational and Applied, ITM University, Gurgaon, India, June 2014.
- *Uni-variate differential transform method of solving family of Falkner-Skan equations*, National Conference on Mathematics, University of Lucknow, India, November 2013.
- *Uni-variate differential transform method of solving nonlinear differential equation*, National Conference MMEA-2013, Bangalore, India, October 2013.
- *Uni-variate differential transform method of solving generalized Falkner-Skan-type equation*, 26th International Conference of Jangjeon Mathematical Society, South Korea at Acharya Institute of Graduate Studies, Bangalore, India, August 2013.
- *Effects of Free Stream Velocity, Suction and Magnetic Field on the flow of a Newtonian fluid due to a linearly or an exponentially stretching sheet*, Award Session of the 57th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM) held at Defense Institute of Advanced Technology, Pune, India, December 2012.
- *Generalized Crane Problem with Free Stream Flow, Suction and Magnetic Field*, International Conference on "Emerging Trends in Fluid Mechanics and Graph Theory" at Christ University, Bangalore, India, August 2012.

POSTER PRESENTATION

- *Rayleigh-Benard convection in nanoliquids, NSF-CBMS Regional Conference on Mathematical Biology: Modeling and Analysis, Howard University, Washington, DC, May 2018.*
- *Circulation in the presence of suspended particles-Lorenz model, Summer School on “Fluid Dynamics of Sustainability and the Environment” held at Ecole Polytechnique, Paris, France in association with Cambridge University, September 2015.*