Y. SUJEET BHAT, PhD

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Postdoctoral Research Appointments & Education

- **Institute for Mathematics and Its Applications (IMA)**—University of Minnesota, Minneapolis, MN
  Industrial Postdoctoral Research Fellow, July 2006 –August 2008
  - Selected as one of only three industry sponsored postdoctoral research fellows at the *Institute for Mathematics and Its Applications* (NSF MRI) to attend the thematic year on Molecular & Cellular Biology.

- **Air Force Research Laboratory (AFRL)**—Wright-Patterson Air Force Base, Dayton, OH
  Postdoctoral Research Associate, July 2006–August 2007
  - Postdoctoral Research Associate assigned to the Sensors Directorate (SNAT) at the *Air Force Research Laboratory* to do machine learning and data-mining based research in Automated Target Recognition.

- **Doctor of Philosophy in Mathematics**—May 2006
  University of Florida, Gainesville, FL
  - *Advisor:* Dr. Shari Moskow. Concentration in PDEs, Multiscale Analysis, Numerical Analysis.

- **Master of Science in Applied Mathematics**—May 1998
  University of Texas at Dallas, Dallas, TX
  - Focus in Statistics, Stochastic Calculus and Mathematical Finance.

- **Bachelor of Science in Mathematics**—August 1995
  University of Florida, Gainesville, FL
  - *Preparatory School:* International School, Manila (ISM) – Makati, Phillipines.

Research

- **Research Impact**
  - MathSciNet Mathematical Reviews: 4 Citations, 4 Publications (Author ID: #775758)
  - ResearchGate: 20 Citations, 5 publications (Author: Yermal Bhat)
  - Google Scholar: 27 Citations (Author: Yermal Bhat)

- **Publications**
  - Y. S. Bhat and S. Moskow, *Linearization of a nonlinear periodic boundary condition arising from corrosion modeling,* Journal of Computational Mathematics, 25, 2007, no. 6.
  - Y. S. Bhat and D. G. Arnold, *Diffusion maps and radar data analysis,* Algorithms for Synthetic Aperture Radar Imagery XIV, Proceedings of the International Society for Optics and Photonics (SPIE), 6568, 2007.
  - Y. S. Bhat and S. Moskow, *Homogenization of a nonlinear elliptic boundary value problem modeling galvanic currents,* Multiscale Modelling and Simulation (SIAM Interdisciplinary Journal), 5, 2006, no.1.
  - Y. S. Bhat, *Homogenization of a nonlinear elliptic boundary value problem modeling galvanic interactions on a heterogeneous surface,* Multiscale Optimization Methods and Applications, Springer, New York, 2006.

- **Research/Work Experience**
  - *Post-Doctoral Research Associate*, in residence for IMA thematic year on **"Mathematics of Molecular and Cellular Biology"**, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, Minnesota, SEPTEMBER 2007—AUGUST, 2008.
  - *Industrial Post-Doctoral Fellow*, ATR and Precision Registration Team, Sensors Directorate, Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio, JULY 2006—AUGUST, 2007.
  - *Consultant*, Sheet Dynamics Limited (SDL), Cinncinnati, Ohio, JANUARY, 2007—SEPTEMBER, 2007.
    Served as a technical advisor on a proposal for the Air Force SBIR (Small Business Innovative Research) Topic entitled *"Enhanced Detection of Hidden Targets Using Multi-Discriminant Ladar"*. Provided technical knowledge in the area of ladar data exploitation. A Phase I contract was awarded to SDL in August, 2007.
  - Participated in the NSF DMS Grant "Asymptotics at Resonant Scales: Applications to inhomogeneous material simulation, discretization and inversion" and NSF DMS Grant "SCREMS: Developing computational mathematics at the University of Florida.", 2006–2009

Computer Skills

- **Mastery in:** FORTRAN, Matlab, R, HTML, LaTeX

Teaching Positions

- **Engineering Honors Program Senior Instructor in Applied Mathematics,** *May 2021 to Present*
  University of Colorado Boulder, College of Engineering & Applied Sciences—Boulder, CO

  - Engineering Honors Program (EHP) Instructor for Andrews Hall Residence Area Program
    The Andrews Hall RAP is a specialized class for students in the Engineering Honors Program as well as for students in the BOLD program (an initiative to achieve parity in engineering and increase retention of underrepresented students).
  - Course Coordinator for Calculus 1 and Calculus 2 for Engineers (*average enrollment: 600 students*)
  - Instructor for Calculus 1*, Calculus 2 and Calculus 3 for Engineers, Differential Equations, Discrete Mathematics, Matrix Methods, Applied Probability, Statistical Methods with R, Numerical Analysis, Fourier Series, Graduate Seminar in Teaching Excellence. (*Both year long & semester long versions.)

- **Engineering Honors Program Instructor in Applied Mathematics,** *August 2012 to June 2021*
  University of Colorado Boulder, College of Engineering & Applied Sciences—Boulder, CO

- **Instructor in Applied Mathematics,** *August 2008 to July 2012*
  University of Colorado Boulder, Department of Applied Mathematics—Boulder, CO

- **Graduate Teaching Assistant,** *September 1998 to May 2006*
  University of Florida, Department of Mathematics—Gainesville, FL

  - Lecturer for Precalculus, Calculus 1, Calculus 2 and Calculus 3
  - Lecturer for "Achievement in Mainstreaming" (AIM) program at the University of Florida
    The AIM program is U.F.'s retention initiative designed to target at-risk freshman. Participants of the program are selected based on SAT or ACT scores. AIM students are offered smaller classes designed to enhance existing mathematical and communication skills. In the Fall of 2003, I was selected to teach one AIM section of Precalculus Algebra. I lectured the main content of the course, met with students 5 times a week and prepared them to be successful in their future college courses.
  - Teaching Assistant for Mathematics for Liberal Arts & Science Majors, Precalculus, Business Calculus, and Calculus 1

- **Lecturer for Calculus 1 (Summer Session),** *May 1998 to August 1998*
  University of Texas at Dallas, Department of Mathematics—Dallas, TX

- **Graduate Teaching Assistant,** *August 1996 to May 1998*
  University of Texas at Dallas, Department of Mathematics—Dallas, TX

  - Teaching Assistant for Calculus 1 and Calculus 2

Awards & Service

- **Marinus G. Smith Teaching Recognition Award Recipient (2012) & Nominee (2019, 2012)** - Nominated by the University of Colorado Parents Association in 2012 & 2019 due to nominations by a students for making a significant impact on the lives of the students at the University of Colorado Boulder. Award recipient in 2012.

- **The John and Mercedes Peebles Innovation in Education Award Nominee (2022, 2010)** - Nominated by students, this is to recognize faculty of the college who have shown a unique commitment to students demonstrated through innovations in education through technology.

- **Certificate of Excellence in Teaching** - Awarded by the University of Florida Mathematics Department in 2006 for consistently high teaching evaluations, performance and excellence in teaching.

- **Program for Excellence in Academics and Community (PEAC)** - PEAC is a summer program sponsored by the Miramontes Arts and Science Program, an inter-departmental program designed to bolster college matriculation among underrepresented populations and first generation college students. I developed a 4 week course in Statistics to better prepare these incoming freshman for their college experience. (2016-2021)

- **Graduate Seminar in Teaching Excellence** - A semester-long education training seminar on excellence in teaching which I have lead since 2012, this is a mandatory course for all incoming graduate Teaching Assistants at CU. (2012-2017)

- **Undergraduate Committee** - Member of the Dept. of Applied Mathematics faculty undergraduate committee which oversees curriculum guidelines and undergraduate student advising. (2013-present)

- **Faculty Advisor, SIAM Undergraduate Chapter** - Served as the faculty advisor for the University of Colorado chapter of the SIAM undergraduate club. I mentor and advise students in planning and organizing various activities throughout the academic year. (2010-2015)

- **Faculty Mentor, High School Honors Institute/ASPIRE** - The High School Honors Institute/ASPIRE is a University of Colorado initiative to expose high school students to the many options available to them in engineering, science and mathematics. I conducted a three day seminar on various topics in applied math and served as a faculty mentor to high school students . (2011-2014)