

# Debananda Chakraborty

Department of Mathematics

New Jersey City University

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## ***Education:***

**Doctor of Philosophy in Mathematics**, State University of New York at Buffalo, 2012.

Thesis Title: *High Order Methods for Hyperbolic PDEs with Singular Source Term*

**Master of Arts in Mathematics**, State University of New York at Buffalo, 2006

**Master of Science in Mathematics**, Jadavpur University, India, 2001

**Bachelor of Science in Mathematics**, Jadavpur University, India, 1994

## ***Academic and Professional Appointments:***

September 2014 - present:

Assistant Professor, Department of Mathematics, [New Jersey City University](#)

September 2012 - May 2014:

Assistant Professor, Department of Mathematics, Virginia Intermont College

September 2009 - July 2012:

Adjunct Instructor, Department of Mathematics, [State University of New York at Buffalo](#)

August 2003 - July 2004:

Lecturer, Department of Mathematics, Haldia Institute of Technology, India

September 1994 - November 1999:

System Engineer, G.S. Enterprise, Kolkata, India

## ***Awards and Honors:***

Mini Grant Award, New Jersey City University, April 2015

Professional Development Award, United University Professional, Buffalo Chapter, 2012

Travel Grant Award, Society of Industrial and Applied Mathematics (SIAM), 2012

Graduate Assistantship, Department of Mathematics, State University of New York at Buffalo, 2004

Award of Merit for 1<sup>st</sup> Class 2<sup>nd</sup> in Master of Science, Jadavpur University, India, 2001

***Referred Journal Publications:***

1. Avner Peleg, **Debananda Chakraborty**,

***Ready for Submission to Peer Reviewed Journal:***

1. **Debananda Chakraborty**, Avner Peleg, *Radiation dynamics in fast two-soliton collisions in the presence of cubic loss.*

***In Preparation:***

1. **Debananda Chakraborty**, Avner Peleg, *Analysis of fast two-pulse collisions in weakly perturbed linear system*
2. **Debananda Chakraborty**, Avner Peleg, *Transmission stabilization in soliton-based optical waveguide systems by frequency dependent linear gain-loss and frequency shifting due to temporal intensity variations*
3. EunSu Lee, **Debananda Chakraborty**, *Trip Generation on Oil Production Sites: A Case Study of Bakken Oil Formation*

10. *Advances and Challenges in Computational General Relativity*, May 22<sup>nd</sup>, 2011, Brown University, Providence, RI

11. *New York Conference on Applied Mathematics*, April 30<sup>th</sup>, 2011, Buffalo, NY

12. *Applied Math Days*

5. *Understanding the Trends of New Developmental Math Curriculum at NJCU: Helping Our Students Succeed*, Opening the Gate Workshop, October 30<sup>th</sup>, 2015, New Jersey City University

6. : Opening the Gate Workshop, March 27<sup>th</sup>, 2015, New Jersey City University

***Research Interest:***

Spectral methods, Higher order finite difference methods, Discontinuous Galerkin methods, Uncertainty Quantification, Polynomial Chaos, Partial Differential Equations, Stochastic Methods, Nonlinear Optics, Financial Mathematics, High Performance Computing, Nonlinear Dynamics, Linear and Nonlinear Waves, Pattern Formation, Population Dynamics Models, Waves in random media

***University Service:***

***Current Member of the Following Committees:***

1. Senate Instructional Technology Committee
2. General Education Committee for Assessment and Policy (GECAP)
3. Department of Mathematics Curriculum Committee
4. Department of Mathematics Scheduling Committee
5. Department of Mathematics Assessment Committee

7. Mathematics Department Math Education Faculty Search Committee

***Computer Skills:***

1. *Microsoft Certified System Professional* on Windows Client-Server

2. Languages: *C++*, *FORTRAN*, *PYTHON*

3. Mathematical Software Packages: *MATLAB*, *MAPLE*, *MATHEMATICA*, *MINITAB*, *GEOGEBRA*

4. Microsoft Office 365: *MS-WORD*, *EXCEL*, *POWERPOINT*, *MS-ACCESS*

5. Mathematics Teaching: *MyMathLab*, *Web-*

***Summer 2017: Under HSI - STEM and MSEIP Grant***

***Student 1: Experimental Modeling with High-Order Polynomials***

***Student 2: An Algorithmic Introduction to Numerical Simulation of Stochastic Differential Equations***

***Student 3: Nonlinear Differential Equations: Application to Chemical Kinetics***

***Student 4: Mathematical Modeling of Disease of Outbreak***

***Spring 2018: Master Thesis***

***Student 1: Compare the Effect of Cooperative Learning on Students Word Problems***

***Spring 2015: Master Thesis***

***Student 1: Infinite Products and the Gamma Function***

***Student 2: Team Teaching***

***References:***

1. Dr. Beimnet Teclezghi

Professor, Dept. of Mathematics, New Jersey City University