

Portfolio

Dr. Arnab Gupta (M.Sc, M.Phil, Ph.D)

Assistant Professor

Department of Mathematics

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Webpage: <http://www.sites.google.com/site/arnabmath08/>

Education:

2008, Ph.D. in Pure Mathematics, Ballygaunge Science College, University of Calcutta.

2002, M.Phil in Pure Mathematics, Ballygaunge Science College, University of Calcutta.

2000, M.Sc in Pure Mathematics, Ballygaunge Science College, University of Calcutta.

1998, B.Sc , Mathematics Honours, St. Xavier's College, Calcutta, University of Calcutta.

1995, Higher Secondary, Cathedral Mission High School, Calcutta.

1993, Madhyamik, Cathedral Mission High School, Calcutta.

Teaching Aids:

UG Level: Mathematical Analysis, Differential Equation

PG Level: Graph Theory, Functional Analysis, Advanced Differential Geometry

Teaching/Research/Industrial Experience

	Previous Positions held	Employer/ Organization	Period/Duration of the position/work
1.	Assistant Professor	Prabhu Jagatbandhu College	March 2015 till date
2.	Assistant Professor	Narula Institute of Technology	6 Years (March 2010 to February 2015)
3.	Assistant Professor	Durgapur Institute of Advanced Technology and management	11 Months (May 2009 to March 2010)
4.	Senior Lecturer	Bengal College of Engineering and Technology	5 Years (July 2005 to May 2009)
5.	Research Fellow (UGC)	UGC	4 Years (April 2002 to July 2005)

Research Interests:

- Differential Equation, Dynamical System
- Fractional Based Calculus
- Quantum Mechanics

Research Project:

Title of the project	Project Funding Agency/Institute	Period	Completed/ ongoing	Amount
On some qualitative aspects of differential equation using fractional based calculus	UGC Minor Research Project/ Prabhu Jagatbandhu College (F.PSW-103/15-16(ERO))	2 Years	Ongoing	Rs. 240000/-

Publications:

1. Solving an Alternative Logistic Delay Differential Equation: A New Approach. Arnab Gupta. International Journal of Trend in Research and Development. Volume 5(1), ISSN 2394-9333, pg 248-254. February, 2018.
2. A new path to reach the solution of fractional mechanical oscillator using Adomain Decomposition Method. Arnab Gupta and Swapan Biswas. JNANABHA, Vol.47, No.2, pg. 267-276, 2017.
3. A Study Of RC Circuit With Semi-Infinite Lossy Transmission Line Using Fractional Based Calculus. Arnab Gupta , Joyanta Kumar Roy , Debabrata Datta . Canadian Journal on Technology Innovation. Page: 219-229, (ISSN:2158-5563), 2014.
4. Optimized WiMAX Network Development in India: Specification and Implementation. Angana Chakraborty, Sajal Saha, Indrajit Banerjee, Arnab Gupta. Computational Advancement in Communication Circuits and Systems Lecture Notes in Electrical Engineering Volume 335, 2015, pp 89-99, ISBN 978-81-322-2273-6, ISSN 1876-1100, Date: 18 Mar 2015.
5. Vector optimal control problem on a differentiable manifold: A realistic approach. Arnab Gupta, Journal of Interdisciplinary Mathematics, Taylor & Francis, Vol 16, Issue 2-03, pg. 117-135, October, 2013.
6. Optimal control problem of a replicator system on differentiable manifold with Boundary. Arnab Gupta and Dilip Kumar Bhattacharya, Journal of Information and optimization sciences Taylor & Francis, Vol. 34, Issue 1, pg. 29-46, January, 2013.

7. Throughput Maximization Problem for Random Allocation of Channels in a Cognitive Radio Network, Subhashree Bhattacharjee, Pijush Basak, Arnab Gupta, Amit Konar and Suman Bhattacharjee.—IEEE Explore Digital Library, pp1-4, 2011.
8. Optimization of a functional on an open manifold with differentiable variety as its Boundary, D.K.Bhattacharya, A.Gupta & T.E.Aman -- Revista De La Academia Canaria De Ciencias, Volume XX, No. 1-2, 33-47, 2009.
9. Permanence Criteria of Replicator Dynamics on a 2-sphere with boundary through Vector Optimization Technique, A.Gupta & D.K.Bhattacharya.-- Revista De La Academia Canaria De Ciencias, Volume XIX, No. 1-2 23- 36, 2008.
10. Generalization of Replicator Dynamics from a 3-simplex to a 2-sphere with Boundary, A.Gupta & D.K.Bhattacharya-- Revista De La Academia Canaria De Ciencias, Volume XVIII, No, 1-2, 33-45, 2006.
11. Permanence and Extinction of solution of ordinary differential equations on a differentiable manifold, D.K.Bhattacharya & A.Gupta-- Ganita, Vol 56, No.2, 105-117, 2005.

Books/ Book Chapter Published

Books

1. Fractional Calculus in Solving Engineering Problems. Arnab Gupta, Jayanta Kumar Roy, Debabrata Datta, Proc. of Int. Conf. on Computing, Communication and Manufacturing 2014, pg. 40-47 (ISBN: 978-1-5108-0969-7), 2014.
2. BCA Mathematics (BM 101)---- Dr. Pijush Basak and Dr. Arnab Gupta. ISBN:978-93-80813-09-7), SPS Publications, 2011.
3. BCA Mathematics (BM 201) ---- Dr. Pijush Basak and Dr. Arnab Gupta. (ISBN: 978-81-923034-4-4) SPS Education, 2012.

Book Chapters

1. Scilab: Free and Open Source Software-- A Scientific Genius. Arnab Gupta. Relavance and Impact of Free and Open Source Software in The Era of Globalization, Madhav Books Pvt. Ltd. (A Unit of Serials Publications), New Delhi, India, pg. 52-68, (ISBN: 978-93-80615-35-6), 2017.

Hobbies

Reading story Books, Gardening.