

Faculty profile for Dr. Srimonti Dutta

1. Name of the faculty: Dr. Srimonti Dutta
2. Name of the Department: Physics
3. Educational qualifications: Ph.D.
4. Present position : Assistant Professor
5. Address for correspondence: 48/1 Dr. A.K. Paul Road, Kolkata-700034
6. E-mail and contact number: srimontid@gmail.com 9748275664
7. Specialization: High Energy Physics, Chaos and Fractals
8. Total teaching experience:16 yrs
9. Courses taught: Under graduate: Mathematical Methods of Physics, Electronics, Acoustics, Classical Mechanics, Particle Physics
10. Research experience: 2004 to Present
11. Minor research projects completed:
12. Title of the project: Use of multifractality as a probe to investigate medical, financial and social non stationary time series
Date of sanction and Duration: 2013 to 2015
Grant received: Rs 81000/-
Funding agency: UGC
PI or Co-PI: PI
13. Number of students awarded Ph.D. degree:

Date Awarded/ Submitted	University	Name of Student	Title of Thesis	Date of declaration of Ph.D. degree
2015	Jadavpur University	Dr. Shukla Samanta	Chaos and Multifractal Analysis in Physical and Social Systems	Awarded 5/10/2015
2017	Jadavpur University	Sucharita Chatterjee	Non linear fluctuation studies in High Energy and Interdisciplinary Physics	Awarded 12/3/2019

14. Participation in conferences, symposia and workshops:
 - DAE-BRNS Symposium on Nuclear Physics during Dec 6-10, 2004 held at Benaras Hindu University, Varanasi. National. Attended
 - International Conference on "Contemporary issues in Nuclear and Particle Physics" organized by Nuclear and Particle Physics Research Centre, Department of Physics, Jadavpur University during 4-7 Feb,2005. Attended

- 5th International conference of Physics and Astrophysics of Quark Gluon Plasma during 8-12 February 2005 at VECC Kolkata. Attended
- “Celebration of world year of Physics -2005” organized by School of community science and technology(SOCSAT) Bengal Engineering and Science University, Shibpur in association with Indian association of Physics Teachers(IAPT) held during Nov 30-Dec.2,2005. State Level.Attended
- DAE-BRNS Workshop on Quark Gluon Plasma-5-7 th Feb 2006.National Level. Attended
- UGC sponsored state level seminar on networking of undergraduate colleges-academic and administrative functions” on 5.2.2007. Attended
- One day seminar on “Physics Experiments: Objectives, Approaches and Learning” organized by IAPT on 8.12.2007. State Level. Attended
- QGP winter school 2008 at Jaipur during Feb 1-3,2008. International. Attended
- Quark Matter 2008, 20th International conference on ultrarelativistic nuclear collisions Feb 4-10, 2008, Jaipur. International. Poster presentation.
- “One week Microprocessor Training Course” organized by Department of Electronics, Vidyasagar college, Kolkata during March 24-29,2008. State Level. Attended
- One day seminar on Music beyond Music, Feb 10,2010, CV Raman Centre for Physics and Music, Kolkata, India. National Level. Attended
- International conference on flavor physics in the LHC era -8-12 November 2010, Singapore. Oral Presentation
- Three day National Workshop on “Frontiers of Research on Speech and Music” organized by ITC Sangeet Research Academy, Kolkata and Sir C V Raman Centre for Physics & Music, Jadavpur University during 5-7 March, 2013. Attended
- National Seminar on Emerging Frontiers in Material Science Organized by Behala College from 15th to 16th February 2019. Attended.

15. Refresher and Orientation courses attended:

Name of the	Place	Duration	Sponsoring
Orientation Course	Academic Staff College, Jadavpur University	4 weeks (16 th Nov-14 th Dec, 2009)	UGC
Refresher Course	Academic Staff College, University of Calcutta	3 weeks (9 th -28 th July, 2012)	UGC
Refresher Course	Academic Staff College, Jadavpur University	3 weeks (28 th Nov-18 th Dec, 2016)	UGC
Short Tem Course	Academic Staff College, Jadavpur University	1 week (3 rd Jan-10 th Jan, 2019)	UGC

16. Publication of research papers: H index: 13

Total No. of Citations: 620

Year	Name of the Journal and ISSN	Impact Factor	Title and Publication Details
2022	Journal of Raman Spectroscopy ISSN:0377-0486	3.133	Are morphologies of SERS active substrates multifractals? An in-depth study from multifractal detrended fluctuation analysis Somsubhra Saha, Srimonti Dutta, Joydeep Chowdhury <i>Journal of Raman Spectroscopy</i> 53 (12), 2031-2043
2021	IEEE Sensors Journal ISSN: 1530-437X	4.325	Multifractal texture analysis of salivary fern pattern for oral pre-cancers and cancer assessment Neha Sharma, Debaleena Nawn, Sawon Pratiher, Sayani Shome, Ritam Chatterjee, Karabi Biswas, Mousumi Pal, Ranjan Rashmi Paul, Srimonti Dutta, Jyotirmoy Chatterjee <i>IEEE Sensors Journal</i> 21 (7), 9333-9340
2020	IEEE Journal of Biomedical and Health Informatics ISSN: 2168-2194	5.772	Multifractal alterations in oral sub-epithelial connective tissue during progression of pre-cancer and cancer Debaleena Nawn, Sawon Pratiher, Subhankar Chattoraj, Debjani Chakraborty, Mousumi Pal, Ranjan Rashmi Paul, Srimonti Dutta, Jyotirmoy Chatterjee <i>IEEE Journal of Biomedical and Health Informatics</i> 25 (1), 152-162
2019	International Journal of Modern Physics E ISSN: 1793-6608	1.174	Projectile mass and energy dependence of multifractal detrended cross-correlation analysis of pseudorapidity space and azimuthal space in high energy nuclear collisions S Chatterjee, D Ghosh, S Dutta <i>International Journal of Modern Physics E</i> 28 (3), 1950012
2019	Physica A ISSN: 0378-4371	2.132	Multifractal approach to study salt induced hypertension and Baroreflex dysfunction in salt sensitive Dahl rat. S.Dutta, K Mukherjee <i>Physica A</i> Volume 515, 2019, Pages 526–536
2018	Physica A ISSN: 0378-4371	2.132	Chaos Based Non linear analysis to study cardiovascular response to change in posture D.Ghosh, S.Dutta, S.Chakraborty, S.Samanta <i>Physica A</i> Volume 512, 2018, Pages 392–403
2018	Physica A ISSN: 0378-4371	2.132	Multifractal detrended cross correlation analysis of neuro- degenerative diseases- an in depth study S.Dutta, D.Ghosh ,S. Chatterjee <i>Physica A</i> 491, 2018, Pages 188–198
2018	International Journal of Global	0.995	Multifractal detrended cross correlation analysis of atmospheric CO ₂ concentration and land surface

	Warming ISSN: 1758-2091(online) 1758-2083(print)		temperature anomalies S. Chatterjee, D.Ghosh, S.Dutta International Journal of Global Warming 16(2) 209-228
2018	International Journal of Global Warming ISSN: 1758-2091(online) 1758-2083(print)	0.995	A multifractal analysis of time series of CO ₂ concentration. S.Dutta, D.Ghosh ,S. Chatterjee International Journal of Global Warming 14(4) 403-416
2017	Scientific Reports ISSN: 2045-2322(online)	4.609	Decoding the morphological differences between Himalayan Glacial and Fluvial landscapes using multifractal analysis S.Dutta Scientific Reports 7(1) 11032
2017	Journal of Neurology and Neuroscience ISSN:2171-6625)	1.45	Chaos based Quantitative Electro diagnostic marker for diagnosis of myopathy, neuropathy and motor neuron disease. D.Ghosh, S.Dutta, S.Chakraborty, S.Samanta Journal of Neurology and Neuroscience 8 S4:226
2017	Translational Biomedicine	1.12	Epileptic Seizure: A new approach for quantification of autonomic deregulation with chaos based technique Translational Biomedicine 8 106
2016	Physica A ISSN: 0378-4371	2.132	Multifractal detrended cross correlation analysis of foreign exchange and SENSEX fluctuation in Indian perspective <i>Physica A</i> Volume 463, 2016, Pages 188–201
2016	Physica A ISSN: 0378-4371	2.132	Non linear approach to study the dynamics of neurodegenerative diseases by Multifractal detrended cross correlation analysis-A quantitative assessment on gait disease <i>Physica A</i> Volume 448, 2016, Pages 181–195
2016	International Journal of Electrical Power and Energy Systems	3.61	Multifractal Behaviour of Electricity Bid price in Indian Energy Market <i>Electrical Power and Energy Systems</i> 74(2016) 162-171
2015	Physica A ISSN: 0378-4371	2.132	Multifractal Detrended Cross-correlation Analysis of Market Clearing Price of Electricity and SENSEX in India <i>Physica A</i> Volume 434, 2015, Pages 52–59
2014	Physica A ISSN: 0378-4371	2.132	Multifractal detrended cross-correlation analysis of gold price and SENSEX <i>Physica A</i> Volume 413, 2014, Pages 195–204
2014	Chaos, Solitons & Fractals ISSN: 0960-0779	2.213	Multifractal detrended cross-correlation analysis for epileptic patient in seizure and seizure free status <i>Chaos, Solitons & Fractals</i> Volume 67, 2014, Pages 1–10
2014	International	1.699	Multifractal detrended fluctuation analysis of

	Journal of Modern Physics A Print ISSN: 0217-751X Online ISSN: 1793-656X		pseudorapidity and azimuthal distribution of pions emitted in high energy nuclear collisions <i>International Journal of Modern Physics A</i> Vol. 29 (2014) 1450084
2014	Physica A ISSN: 0378-4371	2.132	Multifractal parameters as an indication of different physiological and pathological states of the human brain <i>Physica A</i> Volume 396, 2014, Pages 155–163
2013	Frontiers in Physiology ISSN: 1664-042X	4.134	Multifractal detrended fluctuation analysis of human gait diseases <i>Front Physiol.</i> 2013; 4: 274
2012	Modern Physics Letter A Print ISSN: 0217-7323 Online ISSN: 1793-6632	1.308	Void Probability Enhanced Multiplicity Distribution of Produced Hadrons in p-p Collisions at LHC Energies <i>Mod. Phys. Lett. A</i> 27 (2012) 1250145
2012	Acta Physica Polonica B ISSN:0587-4254	0.998	Fluctuation of Gold Price: A Multifractal Approach <i>Acta Physica Polonica B</i> 43 (2012) 1261
2012	Fractals Print ISSN: 0218-348X Online ISSN: 1793-6543	1.629	Multifractality of Radon Concentration Fluctuation in Earthquake Related Signal <i>Fractals</i> 20 (2012) 33-39
2011	Modern Physics Letter A Print ISSN: 0217-7323 Online ISSN: 1793-6632	1.308	Extraction of Clan Model Parameters from Multiplicity Distribution Measured in pp Collisions at LHC Energies <i>Mod. Phys. Lett. A</i> , Vol. 26, No. 39 (2011) pp. 2951-2961
2010	Journal of Statistical Mechanics ISSN: 1742-5468	2.404	Multifractal Properties of ECG Pattern of Patients Suffering from Congestive Heart Failure <i>J. Stat. Mech.</i> (2010) P12021
2010	Fractals Print ISSN: 0218-348X Online ISSN: 1793-6543	1.629	EEG pattern of normal and epileptic rats: monofractal or multifractal? <i>Fractals</i> 18 (2010) 425
2010	Canadian Journal of Physics ISSN:1208-6045	0.964	Multifractal detrended fluctuation analysis of SENSEX fluctuation in the Indian stock market <i>Canadian Journal of Physics</i> 88:(8) 545(2010)
2010	International Journal of Modern Physics A Print ISSN: 0217-751X Online ISSN: 1793-656X	1.699	Non-monotonic Target Excitation Dependence of Pion Clans in Relativistic Nucleus-Nucleus Collisions <i>International Journal of Modern Physics A</i> 25 1507(2010)
2009	Canadian Journal of Physics	0.964	Pionization at AGS and SPS energies degree of coherence and its target excitation dependence

	ISSN:1208-6045		<i>Canadian Journal of Physics</i> 87 311(2009)
2009	Physica Scripta Online ISSN: 1402-4896 Print ISSN: 0031-8949	1.194	Quantitative Estimate of Pion Fluctuation and its Multiplicity Dependence in Nuclear Collisions <i>Phys. Scr.</i> 79 025102(2009)
2008	Canadian Journal of Physics ISSN:1208-6045	0.964	Pion Fluctuation and its Multiplicity Dependence in Ultrarelativistic Nuclear Collisions <i>Canadian Journal of Physics</i> 86(5) 751(2008)
2007	Physica Scripta Online ISSN: 1402-4896 Print ISSN: 0031-8949	1.194	Void Analysis of Pions and its Multiplicity Dependence at Dubna and SPS Energies <i>Phys. Scr.</i> 77 015201(2008)
2007	Fractals Print ISSN: 0218-348X Online ISSN: 1793-6543	1.629	Multifractality and Multifractal Pionic Specific Heat in Nuclear Collisions—Target Excitation Dependence <i>Fractals</i> 15 391(2007)
2007	Journal of Physics G Online ISSN: 1361-6471 Print ISSN: 0954-3899	3.456	Higher Order Correlation of Pions and its Target Excitation Dependence in Relativistic and Ultrarelativistic Nuclear Collisions <i>J. Phys. G: Nucl. Part. Phys.</i> 34 2567(2007)
2007	Physica Scripta Online ISSN: 1402-4896 Print ISSN: 0031-8949	1.194	Target Excitation Dependence of Pion Fluctuation in Relativistic Heavy Ion Collision at 2.1 and 60 AGeV <i>Phys. Scr.</i> 75 676(2007)
2007	Fizika B ISSN: 1330-0016	-	Fluctuation of Pions in Relativistic and Ultrarelativistic Nuclear Collisions—Scale Dependent or not? <i>Fizika B</i> 16(2) 67(2007)
2006	Journal of Physics G Online ISSN: 1361-6471 Print ISSN: 0954-3899	3.456	Excitation Energy Dependence of Pion Fluctuation -an In-depth Study <i>J. Phys. G: Nucl. Part. Phys.</i> 32 1241(2006)
2006	Indian Journal of Physics ISSN: 0973-1458 (print version) ISSN: 0974-9845 (electronic version)	0.988	Multi-dimensional fluctuation analysis of target residue in nuclear collisions <i>Indian Journal of Physics</i> 80(7) 751 (2006)