

# Dr. Amaresh Bej

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Current Designation: State Aided College Teacher (Category-1)

Department: Electronics

Date of Joining: 25-09-2007

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Phone (Optional):



## 1. Academic Qualifications (Master's degree onwards)

Degree	Institution	Year	Subject/Discipline
M.Sc.	University of Calcutta	2006	Electronic Science
Ph.D.	IEST, Shibpur	2023	Physics

## 2. Thesis Title

Ph.D. Thesis Title: Characteristic Study and Prediction of Geomagnetic Indices Based on Pattern Recognition and Data Mining

## 3. Specialization and Area of Interests

Specialization: Geomagnetic Disturbances, Pattern Recognition

Area of Interests: Data Science

## 4. Teaching Responsibilities

1. C programming and Data structures
2. Operational Amplifier and Applications
3. Electronic Instrumentation
4. Digital Circuits, Microprocessors, and Microcontrollers
5. Computer Networking

## 5. Publications

### a. Research Papers in Journals

1. Bej, A., Banerjee, A., Chatterjee, T. N., and Majumdar, A. (2022), One-hour ahead prediction of the Dst index based on the optimum state space reconstruction and pattern recognition, The European Physical Journal Plus, Vol. 137, Issue 4.
2. Bej, A., Banerjee, A., Chatterjee, T. N., and Majumdar, A. (2021), A comparative study between Dst and SYM-H indices based on pattern identification. IJTP, Vol 68 (13-26), ISBN: 0019-5693

3. Banerjee, A., Bej, A., Chatterjee, T. N., and Majumdar, A. (2021), A SOC based avalanche model to study the magnetosphere-ionosphere energy transfer and AE index fluctuations, NRIAG Journal of Astronomy and Geophysics, Vol. 11, Issue 1, pp. 33-47
4. Banerjee, A., Bej, A., Chatterjee, T. N., and Majumdar, A. (2019), An SOC Approach to Study the Solar Wind-Magnetosphere Energy Coupling, Earth and Space Science, Vol. 6, Issue 4, pp. 565-576, American Geophysical Union (AGU)
5. Banerjee, A., Bej, A., Chatterjee, T. N., Majumdar, A. (2018), On the threshold value of IMF  $B_z$  in relation with geomagnetic storm and Dst index, IJTP, vol 65 Nos 3&4. ISSN/ISBN: 0019-5693
6. Banerjee, A., Bej, A., and Chatterjee, T. N. (2015), A cellular automata-based model of Earth's magnetosphere in relation with Dst index, Space Weather, 13, 259-270
7. Banerjee, A., Bej, A., and Chatterjee, T. N. (2012), On the existence of a long-range correlation in the Geomagnetic Disturbance storm time (Dst) index, *Astrophys Space Sci*, 337, 23-32

#### **b. Research Papers in Conferences**

1. Bej, A., Banerjee, A., Chatterjee, T. N., and Majumdar, A., An analytical study to find long-range correlation in SYM-H index (2019), 12<sup>th</sup> International Conference on Plasma Science and Applications, Asia African Association for Plasma Training, Lucknow University
2. Banerjee, A., Bej, A., Chatterjee, T. N., and Majumdar, A., A sandpile model to study the dynamics of terrestrial magnetosphere (2019), 12<sup>th</sup> International Conference on Plasma Science and Applications, Asia African Association for Plasma Training, Lucknow University

#### **6. Oral/Poster Presentations**

Title	Event	Type (Oral/Poster)	Date	Venue
An analytical study to find long-range correlation in SYM-H index	12 <sup>th</sup> International Conference on Plasma Science and Applications, Asia African Association for Plasma Training	Poster	13-11-2019	Lucknow University

#### **7. Membership in Academic Bodies**

1. Examination Sub-Committee
2. ICT Sub-Committee
3. Data Management Sub-Committee
3. Online Admission & Registration Sub-Committee