

DR. SUDARSAN BARUI

Current Designation: **Assistant Professor**

Department: **Electronics**

Date of Joining: **29.09.2016**

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1. Academic Qualifications

Degree	Institution	Year	Subject/Discipline	Remarks
M.Tech	University of Calcutta	2001	Radio Physics & Electronics	First Class
Ph.D. (Tech)	University of Calcutta	2015	Radio Physics & Electronics	Awarded

2. Thesis Title

Ph.D. Thesis Title: "Investigations of Earthquakes and some Geophysical Events through VLF Sferics and Transmitted Signals".

3. Specialization and Area of Interests

Specialization: VLF Spectra, Communications, Microprocessors

Area of Interests: Atmospheric electricity, Seismo-electromagnetism, Schumann Resonance

4. Teaching Responsibilities

Basic circuit theory, PSpice Simulation, Communication, Microprocessor & Microcontrollers

5. Teaching Experience:

a. Guest lecturer, Department of Physics, Suredranath Evening College, 24/2 Mahatma Gandhi Road, Kolkata-700 009, University of Calcutta, India. (Electronics Equipment Maintenance dept. & Physics dept.). Since February 2000 - 2015.

b. Assistant Professor, Department of Electronics, Dinabandhu Andrews College, 54, Raja S.C. Mullick Road, Kolkata- 700 084, University of Calcutta, India. Since September 2016 till UpToDate.

6. Publications

a. Research Paper:

1. On Some Observations of Solar and Terrestrial Phenomena by Subionospheric Transmitted Signals, Bulg. J. Phys. **35**, (2008), 141-152. ISSN: 1314-2666. Authors: S.S.De, B.Bandyopadhyay, B.K.De, S.Paul, D.K.Halder, **S.Barui**, S. Bhattacharya.

2. Solar flare effects on propagation of Sferics and transmitted signal, Bulg. J. Phys. **35**, (2008), 153-162. ISSN: 1314-2666. Authors: S.S.De, B.K.De, M.Pal, B.Bandyopadhyay, A.Guha, S.Paul, D.K.Halder, **S.Barui** and R.Roy.
3. Analyses of Schumann resonance spectra from Kolkata and their possible interpretations, Indian J. Radio Space Physics, **38**, (2009), 208-214. ISSN: 0367-8393. Authors: S.S.De, B.K.De, B.K.Sarker, B.Bandyopadhyay, D.K.Halder, Suman Paul and **S.Barui**.
4. The effects of recent solar eclipse upon a subionospheric transmitted signal, Indian J. of Physics, **83**, (2009), 1245-1250. ISSN: 0974-9845. Authors: S.S.De, Suman Paul, D. K. Haldar, **S. Barui**, Minu Sanfui and B. Bandyopadhyay.
5. Some studies of solar flare effects on the propagation of Sferics and a transmitted signal, Indian J. Radio Space Physics, **38**, (2009), 260-265. ISSN: 0367-8393. Authors: B. K. De, S. S. De, B. Bandyopadhyay, Suman Paul, **S. Barui** and D. K. Haldar.
6. The Effects of Solar Eclipse of August 1, 2008 on Earth's Atmospheric Parameters, Pure & Appl. Geophys., (2009), DOI: 10.1007/s00024-009-0041-0. ISSN: 1420-9136. Authors: S. S. De, B. Bandyopadhyay, B. K. Sarkar, Suman Paul, D. K. Haldar, **S.Barui**, Asim Datta, S. S. Paul and N. Paul.
7. Studies on the shift in the frequency of the first Schumann resonance mode during a solar proton event, J. Atmos. Sol. Terr. Phys. (UK), **72**, (2010), 829-836. ISSN: 1364-6826. Authors: S. S. De, B. K. De, B. Bandyopadhyay, Suman Paul, D. K. Haldar and **S.Barui**.
8. Effects on Atmospherics at 6 kHz and 9 kHz recorded at Tripura during the India-Pakistan Border Earthquake, Natural Hazards and Earth System Science (Germany), **10**, (2010), 843-855. ISSN: 1684-9981. Authors: S. S. De, B. K. De, B. Bandyopadhyay, Suman Paul, D. K. Haldar, A. Bhowmick, **S. Barui** and Rousan Ali.
9. Detection of 2009 Leonid, Perseid and Geminid Meteor Showers through its effects on Transmitted VLF Signals, Astrophys Space Sci., (2010), DOI 10.1007/s10509-010-0513-9. ISSN: 1572-946X. Authors: S.S. De, B.K. De, Pinaki Pal, B. Bandyopadhyay, **S. Barui**, D.K. Haldar, Suman Paul, Minu Sanfui and Goutami Chattopadhyay.
10. Dependence of Some Features of VLF Sferics on Source and Propagation Parameters, Bulg. J. Phys., **37**, (2010), 24-36. ISSN: 1314-2666. Authors: B.K. De, S. Debnath, P. Pal, S.S. De, B. Bandyopadhyay, A. Bhowmick, S. Paul, D.K. Haldar, **S. Barui** and G. Chattopadhyay.
11. Studies on the anomalies in the behaviour of transmitted subionospheric VLF electromagnetic signals and the changes in the fourth Schumann resonance mode as signatures of two pending earthquakes, Indian J. Phys., **85(3)**, (2011), 447-470. ISSN: 0974-9845. Authors: S.S.De, B. Bandyopadhyay, T. K. Das, Suman Paul, D.K. Haldar, B.K. De, **S. Barui**, Minu Sanfui, Pinaki Paul and Goutami Chattopadhyay.
12. Effects of the India-Pakistan border earthquake on the atmospherics at 6 kHz and 9 kHz recorded at Tripura, Annals of Geophysics, **54(1)**, (2011), DOI: 10.4401/ag-4779. ISSN: 1432-0576. Authors: Syam Sundar De, Barin Kumar De, Bijoy Bandyopadhyay, Suman Paul, Dilip Kumar Haldar, Adhip Bhowmick, **Sudarsan Barui** and Rousan Ali.
13. Studies on the precursors of an Earthquake as the VLF electromagnetic Sferics, Rom. Journ. Phys., **56 (9-10)**, (2011), 1208-1227. ISSN : 1221-146X. Authors: S. S. De, B. K. De, B. Bandyopadhyay, Suman Paul, D. De, **S. Barui**, Minu Sanfui, Pinaki Pal and T. K. Das.

14. AILA-2009: Its Effects on VLF IFIA and Probable Scientific Explanation, Bulg. J. Phys., **38**, (2011), 433–447. ISSN: 1314-2666. Authors: S.S. De, B. Bandyopadhyay, S. Paul, D.K. Halder, M. Sanfui, B.K. De, S. Chattopadhyay, A.K. Kundu and **S. Barui**.
15. Studies on the Effects of 2009 Leonid Meteor Shower on Subionospheric Transmitted VLF Signals and Vertical Electric Potential Gradient, Earth Moon Planets, **108**, (2012), 111–121, DOI 10.1007/s11038-011-9386-3. ISSN: 1573-0794. Authors: S. S. De, B. Bandyopadhyay, **S. Barui**, Suman Paul, D. K. Halder, D. De, B. K. De, S. Chattopadhyay and A. K. Kundu.
16. Analyses of the effects of several earthquakes on the sub-ionospheric VLF-LF signal propagation, J. Atmos. Sol. Terr. Phys., **81–82**, (2012), 20–26. ISSN: 1364-6826. Authors: S. S. De, Suman Paul, D. K. Halder, D. De, A. K. Kundu, S. Chattopadhyay and **S. Barui**.
17. Point Discharge Current during a solar eclipse, Earth Moon Planets, DOI: 10.1007/s11038-013-9424-4, (2013). ISSN: 1573-0794. Authors: S. S. De, Suman Paul, **S. Barui**, P. Hazra, D. Kala, D. K. Halder, A. Ghosh and G. Guha.
18. Studies on the seasonal variation of atmospheric electricity parameters at a tropical station in Kolkata, India, J. Atmos. Sol. Terr. Phys., **105–106**, (2013), 135–141. ISSN: 1364-6826. Authors: S.S. De, Suman Paul, **S. Barui**, Pinaki Pal, B. Bandyopadhyay, D. Kala and A. Ghosh.
19. Characteristic feature studies of integrated field intensity of sferics at the North-East India, Indian J. Radio Space Physics, **42**, (2013), 397- 403. ISSN: 0367-8393. Authors: **Sudarsan Barui**, S. S. De, D. K. Halder, Suman Paul, G. Guha, P. Hazra and A. Ghosh.
20. Earth's Atmospheric Electricity Parameter Response during Venus Transit, Terr. Atmos. Ocean. Sci., **26** (2), Part I, (2015), 135-143, doi: 10.3319/TAO.2014.10.28.01(AA). ISSN: 1017-0839. Authors: Syam Sundar De, Suman Paul, **Sudarsan Barui**, Dilip Kumar Halder, and Gautam Guha.
21. Studies on the influence of two large Earthquakes ($M > 6$) upon 9 kHz sferics recorded from Kolkata, Rom. Journ. Phys., **60**, (7–8), (2015), 1218–1224. ISSN : 1221-146X. Authors: P. Hazra, **Sudarsan Barui**, S. S. De and Suman Paul.
22. কলকাতা থেকে রেকর্ড করা 7 kHz sferics এর উপর বৃহৎ ভূমিকম্পের ($M > 7$) প্রভাব, Ebong Mahua, UGC CARE List-1, 142, (2021), 336-343. Author: Dr. Sudarsan Barui
23. Studies on the influence of large earthquakes ($M > 7$) upon 9 kHz sferics recorded from Kolkata, International Journal of Innovative Research in Technology, Vol. 08, 555–558, (2021), ISSN: 2349-6002. Author: Dr. Sudarsan Barui
24. Studies on the effects of AMPHAN-2020 on VLF sferics, Metszet Journal, Vol. 09 (7), (2024), 239-243, ISSN: 2061-2710. Author: Dr. Sudarsan Barui

b. LIST OF CONFERENCE & WORKSHOP PAPERS AT INTERNATIONAL AND NATIONAL LEVEL:

1. Analyses of the records of Schumann resonance spectra from Kolkata and their possible interpretation - Proceeding of the National Space Science Symposium (NSSS-2008), held during 26-29 February, 2008, at Udagamandalam (Ooty). Authors: S.S.De, B.K.De, B.K.Sarker, B.Bandyopadhyay, Dilip Kumar Halder and **Sudarsan Barui**.

2. AILA-2009 and its Effects on VLF sferics - Proceeding of the International Conference on Computers and Devices for Communication (CODEC-2009), held during 14-16 December, 2009, at Hyatt Regency (Kolkata). Authors: S. S. De, B. Bandyopadhyay, Suman Paul, D. K. Haldar, S. Nandi, Minu Sanfui, **S. Barui**, and Goutami Chattopadhyay.
3. On Some Effects of Perturbations in the Ionosphere due to Electromagnetic Precursory Signals from Earthquake - Proceeding of the International Conference on Computers and Devices for Communication (CODEC-2009), held during 14-16 December, 2009, at Hyatt Regency (Kolkata). Authors: S. S. De, B. K. De, B. Bandyopadhyay, Suman Paul, D. K. Haldar, **S. Barui**, Minu Sanfui, A. Bhowmick, Pinaki Pal, S. Nandi and T. K. Das.
4. Effects of Solar Eclipse of July 22, 2009 on VLF Signals and Atmospheric Electricity Parameters over Kolkata - Proceeding of the International Conference on Computers and Devices for Communication (CODEC-2009), held during 14-16 December, 2009, at Hyatt Regency (Kolkata). Authors: S. S. De, B. K. De, B. Bandyopadhyay, T. K. Das, Suman Paul, D. K. Haldar, S. Nandi and **S. Barui**.
5. Studies on the variation of first Schumann resonance mode during Solar cycle changes - Proceeding of the National Space Science Symposium (NSSS-2014) (**Oral presentation**), held during January 29-February 01, 2014, at Dibrugarh University. Author: **Sudarsan Barui**.
6. Using Schumann Resonance to predict the climate is a recent marvel! Indian Knowledge System, **Book Chapter**, 163-167, 2025

7. PERTICIPATING TRAININGS/WORKSHOPS:

1. Worked as a Research Worker under a research project entitled “Monitoring Global Electricity Parameters” funded by Indian Space Research Organization (ISRO), at the S. K. Mitra Centre for Research in Space Environment, Institute of Radio Physics and Electronics, University of Calcutta, Kolkata 700 009, India.
2. Actively participated in 15th National Space Science Symposium-2008, held at Udhagamandalam (ooty) 643001, India, during February 26-29, 2008.
3. Actively participated in “National workshop on atmospheric and space sciences (NWASS) 2010” held during November, 23-24, 2010, organized by S. K. Mitra Centre for Research in Space Environment, Institute of Radio Physics and Electronics, University of Calcutta, Kolkata 700 009, India.
4. Actively participated and successfully carried out a Capacity Building Training Programme (Computer) as Key Resource Persons (KRP), held during July 23 – 30, 2012, organized by Birla Industrial and Technological Museum, Ministry of Culture, Govt. of India and Paschim Banga Sarva Shiksha Mission, Govt. of West Bengal.
5. Actively participated in 18th National Space Science Symposium-2014, held at Dibrugarh University, Assam, India, during January 29-February 01, 2014. Paper presented (oral): Studies on the variation of first Schumann resonance mode during Solar cycle changes.
7. Actively participated in WBHED Sponsored workshop on “Physics Learning Methodology-Theoretical and Experimental”, held at Dinabandhu Andrews College on November 8th, 2017.

8. Actively participated in One-week Hands-On Training Programme on “Fabrication and Characterization of Advanced photovoltaic Devices” held during December, 12-18, 2022, organized by Department of Physics, Indian Institute of Engineering Science & Technology (IIST), Shibpur under the aegis of DST-STUTI programme of Indian Institute of Technology (ISM), Dhanbad-826004, funded by the Department of Science and Technology (DST), Government of India.
9. Actively participated in “International conference on Astrophysics and Space Science with Meteorological Balloons” held during April, 02-04, 2025, organized by Indian Centre for Space Physics, Sister Institute of University of Calcutta and University of Gour Banga, Kolkata 700 099, India.

8. Membership in Academic Bodies

Member, P.G. Board of Studies in Electronic Science, Since September 2018 till up-to date.

9. Administrative Responsibility

- a. Member, Online Admission & Registration Sub Committee
- b. Joint Convener, Building & Infrastructure Management Sub Committee
- c. Member, Examination Sub Committee
- d. Member, Students’ Welfare Sub Committee
- e. Member, Purchase and E-Tender Sub Committee
- f. Member, Data Management Sub Committee
- g. Member, Scholarship Sub Committee
- h. Member, Sports & Cultural Sub Committee
- i. Member, Waste Management Sub Committee