

LIST OF PUBLICATIONS AND PATENTS

PUBLICATIONS (PUBLISHED/SUBMITTED)

JOURNALS

- [1] **Chakrabarti, Satarupa**, Jeevan Upadhyaya, Rahul Rathi, Virendra Yadav, Dipjyoti Patgiri, Gaurav Dixit, M.V. Sunil Krishna and Sumanta Sarkhel. **Automatic Localization and Characterization of Mid-latitude Ionospheric Plasma Structures from All-sky Airglow Images using Deep Learning Framework.** *Advances in Space Research*, 2025 (IF: 2.8) (SCIE, Scopus) <https://doi.org/10.1016/j.asr.2025.05.086>
- [2] **Chakrabarti, Satarupa**, Dipjyoti Patgiri, Rahul Rathi, Gaurav Dixit, M.V. Sunil Krishna, and Sumanta Sarkhel. **Optimizing a Deep Learning Framework for Accurate Detection of the Earth's Ionospheric Plasma Structures from All-sky Airglow Images.** *Advances in Space Research* (2024) (IF: 2.8) (SCIE, Scopus) <https://doi.org/10.1016/j.asr.2024.03.014>
- [3] **Chakrabarti, Satarupa**, Aleena Swetapadma, and Prasant Kumar Pattnaik. **An improved method for recognizing pediatric epileptic seizures based on advanced learning and moving window technique.** *Journal of Ambient Intelligence and Smart Environments* 14(1) (2022), 39-59 (IF: 2.759) (SCIE, Scopus) <https://doi.org/10.3233/AIS-210042>
- [4] **Chakrabarti, Satarupa**, Aleena Swetapadma, and Prasant Kumar Pattnaik. **A channel independent generalized seizure detection method for pediatric epileptic seizures.** *Computer Methods and Programs in Biomedicine* 209 (2021): 106335. (IF: 6.1) (SCI, Scopus) <https://doi.org/10.1016/j.cmpb.2021.106335>
- [5] **Chakrabarti, Satarupa**, Aleena Swetapadma, Asish Ranjan, and Prasant Kumar Pattnaik. **Time domain implementation of pediatric epileptic seizure detection system for enhancing the performance of detection and easy monitoring of pediatric patients.** *Biomedical Signal Processing and Control* 59 (2020): 101930. (IF: 5.1) (SCIE, Scopus) <https://doi.org/10.1016/j.bspc.2020.101930>
- [6] Swetapadma, Aleena, **Satarupa Chakrabarti**, Almoataz Y. Abdelaziz, and Hassan Haes Alhelou. **A Novel Relaying Scheme Using Long Short-Term Memory for Bipolar High Voltage Direct Current Transmission Lines.** *IEEE Access* 9 (2021): 119894-119906. (IF: 3.367) (SCIE, Scopus) <https://doi.org/10.1109/ACCESS.2021.3107478>
- [7] Swetapadma, Aleena, **Satarupa Chakrabarti**, and Almoataz Y. Abdelaziz. **Feasibility study of intelligent fault location estimation methods for double-circuit transmission lines.** *International Transactions on Electrical Energy Systems* 31, no.

12 (2021): e13198. (IF: 2.86) (SCIE, Scopus) <https://doi.org/10.1002/2050-7038.13198>

- [8] Swetapadma, Aleena, Shobha Agarwal, **Satarupa Chakrabarti**, Soham Chakrabarti, Adel El-Shahat, and Almoataz Y. Abdelaziz. **Locating Faults in Thyristor-Based LCC-HVDC Transmission Lines Using Single End Measurements and Boosting Ensemble.** *Electronics* 11, no. 2 (2022): 186. (IF: 2.69) (SCIE, Scopus) <https://doi.org/10.3390/electronics11020186>
- [9] Abdar, Moloud, Mohammad Amin Fahami, **Satarupa Chakrabarti**, Abbas Khosravi, Paweł Pławiak, U. Rajendra Acharya, Ryszard Tadeusiewicz, and Saeid Nahavandi. **BARF: A new direct and cross-based binary residual feature fusion with uncertainty-aware module for medical image classification.** *Information Sciences* 577 (2021): 353-378. (IF: 8.1) (SCI, Scopus) <https://doi.org/10.1016/j.ins.2021.07.024>
- [10] Rathi, Rahul, Akash Kumar, Alok Kumar Ranjan, Dipjyoti Patgiri, **Satarupa Chakrabarti**, Lot Ram. **A contrasting TEC behavior over the low-latitude post-midnight sector during recovery phase of May and October 2024 storms: Possible role of PPEF, DDEF, and O/N₂.** Under review in *JGR Space Physics* (2026)
- [11] Upadhyaya, Jeevan, **Satarupa Chakrabarti**, Rahul Rathi, Virendra Yadav, Dipjyoti Patgiri, Gaurav Dixit, M.V. Sunil Krishna, Sumanta Sarkhel. Automatic Characterization of Mid-latitude Multiple Ionospheric Plasma Structures from All-sky Airglow Images using Deep Learning Technique. Under review in *Journal of Geophysical Research – Machine Learning and Computation* (2026) <https://doi.org/10.48550/arXiv.2603.15333>

BOOK CHAPTERS

- [1] **Chakrabarti, Satarupa**, Aleena Swetapadma, and Prasant Kumar Pattnaik. **A review on epileptic seizure detection and prediction using soft computing techniques.** In *Smart Techniques for a Smarter Planet*, pp. 37-51. Springer, Cham, (2019). (Scopus) https://doi.org/10.1007/978-3-030-03131-2_3
- [2] Swetapadma, Aleena, Shobha Agarwal, **Satarupa Chakrabarti**, and Soham Chakrabarti. **A Novel Nearest Neighbor Searching-Based Fault Distance Location Method for HVDC Transmission Lines.** *Artificial Intelligence-based Smart Power Systems* (2023): 141-155 Wiley. <https://doi.org/10.1002/9781119893998.ch8>

CONFERENCES

- [1] Presented a Poster entitled “**Extraction of Parkinson’s disease related temporal feature of brain activity**” in Digitalize in Stockholm 2025 held at Stockholm, Sweden.
- [2] Presented a work entitled “**Optimizing a Deep Learning Framework for Accurate Detection of the Earth’s Ionospheric Plasma Structures from All-sky Airglow**”

Images” in **22nd National Space Science Symposium (NSSS-2024)** held at Goa University, India.

- [3] **Chakrabarti, Satarupa**, Aleena Swetapadma, Prasant Kumar Pattnaik. (2022) **A Method for Detecting Epileptic Seizure in Pediatrics Patients Based on EEG Signals**. In: Kaiser M.S., Bandyopadhyay A., Ray K., Singh R., Nagar V. (eds) *Proceedings of Trends in Electronics and Health Informatics. Lecture Notes in Networks and Systems*, vol 376. Springer, Singapore. **(Scopus)**
Awarded: Best Innovative Paper
- [4] **Chakrabarti, Satarupa**, Aleena Swetapadma, and Prasant Kumar Pattnaik. **A channel selection method for epileptic EEG signals**. In *Emerging Technologies in Data Mining and Information Security*, pp. 565-573. Springer, Singapore, (2019). **(Scopus)**
- [5] **Chakraborti, Satarupa**, Aditi Choudhary, Avantika Singh, Raunak Kumar, and Aleena Swetapadma. **A machine learning based method to detect epilepsy**. *International Journal of Information Technology* 10, no. 3 (2018): 257-263. **(Scopus)**
- [6] **Chakrabarti, Satarupa**, Aleena Swetapadma, Prasant Kumar Pattnaik, and Tina Samajdar. **Pediatric Seizure prediction from EEG signals based on unsupervised learning techniques using various distance measures**. In *2017 1st International Conference on Electronics, Materials Engineering and Nano-Technology (IEMENTech)*, pp. 1-5. IEEE, (2017). **(Scopus)**
- [7] Chakrabarti, Soham, **Satarupa Chakrabarti**, and Aleena Swetapadma. **A Review on Various Artificial Intelligence Techniques Used for Transmission Line Fault Location**. In *2018 3rd International Conference on Inventive Computation Technologies (ICICT)*, pp. 105-109. IEEE, (2018). **(Scopus)**

PATENTS

- [1] **Chakrabarti, Satarupa**; Swetapadma, Aleena; Pattnaik, Prasant. (2022). A generalized epileptic seizure detection framework independent of defined channels. (Australian Patent No. 2021103639), IP Australia. **(Patent Granted)**
- [2] Swetapadma, Aleena; Singh, Nitya; **Chakrabarti, Satarupa**; Pattnaik, Prasant, (2023). Pediatric epileptic seizure detection using quantum support vector classifier. (Indian Patent Application No. 202331063952) (Submitted)