Dr. Sonali Sen
Associate Professor
Department of Computer Science
St. Xavier's College (Autonomous), Kolkata
Email – sonalisen@sxccal.edu

Academic Qualifications

Ph.D (Computer Science & Engineering) – Specialization in Signal Processing and Soft Computing in 2022
M.Tech (Computer Science & Engineering.) – 1st Class in 2005
M.SC (Computer & Information Science) – 1st Class in 2003
B.Sc (Computer Science) – 1st Class in 2001

Research Statement

Signal Processing
Machine Learning
VLSI Circuit Design
Security and Optimization

Publications

- "Overlapped Fingerprint Separation using Graph based Model", IEEE Silchar Subsection Conference (SILCON), November 2022, DOI: 10.1109/SILCON 55242.2022.10028828
- "Prediction of particle size distribution of a ball mill using Improvised neural network technique and time series Acoustic signal", international journal of Industrial Engineering, 21(1), 99-111, 2020
- "Minutiae Based Fingerprint Verification using Graph Model", International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249-8958 (Online), Volume-8 Issue-6, August, 2019
- "Classification of Ball Mill Acoustic for Predictive Grinding using PCA on Time and Frequency Domain Data", International Journal of Engineering and Advanced Technology 9(3):1934-1941, February 2020, DOI: 10.35940/ijeat.C5551.029320
- "Classification of Ball Mill Acoustic for Predictive Grinding Using PCA", Computational Intelligence in Pattern Recognition, January 2020, DOI: 10.1007/978-981-13-9042-5_37
- "Prediction of the State of Grinding Materials in Run Time Using Genetic Operator", Advances in Intelligent Systems and Computing, ICCI-2017, January 2019, DOI: 10.1007/978-981-13-1132-1_37, In book: Computational Intelligence: Theories, Applications and Future Directions - Volume I
- "Fraud Pattern Recognition In Banking Sector Using Graph Database", International journal of computer sciences and engineering 6(6):1394-1398, June 2018, Doi: 10.26438/ijcse/v6i6.13941398

- "Mathematical modeling of predictive grinding for ball mill", TENCON 2016 - 2016 IEEE Region 10 Conference, Singapore, November 2016, DOI: 10.1109/TENCON.2016.7848197
- "Extraction, Identification and Regeneration of Source Audio Signal Using HHT and SVM", International Conference on Computational Intelligence and Communication Networks (CICN), December 2015, DOI: 10.1109/CICN.2015.74
- "Design of an Intelligent Voice Controlled Home Automation System", International Journal of Computer Applications 121(15):39-42, July 2015, DOI: 10.5120/21619-4904
- "Automatic Fault Identification of a Mechanical System using Genetic Algorithm", International Journal of Computer Applications 104(9):25-31, October 2014, DOI: 10.5120/18232-9201
- "VLSI Routing in Multiple Layers using Grid based Routing Algorithms", International Journal of Computer Applications 93(16):41-45, May 2014, DOI: 10.5120/16303-6210
- "Automatic Fault Identification of a Mechanical System using Genetic Algorithm", International Journal of Computer Applications 104(9):25-31, October 2014, DOI: 10.5120/18232-9201
- "Design of Intelligent Control System Using Acoustic Parameters for Grinding Mill Operation", National Conference on Advancement of Computing in Engineering Research, March 2013, DOI: 10.5121/csit.2013.3224
- "A Study on the Feasibility of E-Learning in the Field of Higher Education", UGC sponsored seminar on ICT in Higher Education- Opportunities and Challenges in the 21st Century March 2012

Minor Project

- Completed UGC sponsored Minor project titled "Intelligent Control System to Detect Fault of a Machine by Analyzing Acoustic Parameters" worth 4,22,400

Ph.D Supervisor

- Guiding Ph.D Scholars

Worked as a Resource Person

- Kanyashree
- LSSDC, Government of India
- ARMY Training Course, Government of India

SWAYAM MOOC Course

- Contributed as as E-content Developer