

Curriculum Vitae: Tatiana Chakravorti

Personal Details

Name: Tatiana Chakravorti
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Academic Qualification...

PhD in Informatics (Currently Pursuing)

GPA = 3.7/4

Institute: Penn State University
Dept: Information Science and Technology (IST)
Supervisor: Dr. Sarah Rajtmajer

PhD in Electronics and Communication Engineering (ECE)

Institution: Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, India

CGPA: 8.66/10 (Course Work)

Supervisor: Prof. (Dr.) P. K Dash

Thesis Title: Machine Learning Techniques for Analysis and Pattern Recognition of Non-stationary Signals and Non-linear Systems

M. Tech in Electronics and Communication Engineering

Institution: West Bengal University of Technology; CGPA: 8.29/10

B. Tech in Electronics and Communication Engineering

Institution: West Bengal University of Technology; CGPA: 7.37/10

Skills:

Python, MATLAB/Simulink, Microsoft Office, C language

Research Interests

My research interests are in artificial intelligence, data science and machine learning algorithms for the prediction and classification of different real-time data sets. Currently, I am working in hybrid prediction markets with artificial agents and human participants for determining experimental reproducibility. Previously, I have worked on datasets collected from wide-area monitoring systems, detection, and classification of disturbances, such as faults, islanding, and different power quality events.

Work Experience

1. Working as a Teaching Assistant in Privacy and Security for Data Sciences from 1st Aug 2022.
2. Working as a Research Assistant in DARPA SCORE Project from 1st Aug 2021 to 31st 2022.
3. Worked as an Assistant Professor at KLEF (Deemed to be University) in Vijayawada, Andhra Pradesh from 25th March 2019 to 18th Dec 2020.
4. Worked as a lecturer in the practical training courses and also worked in the research project LINDA (Local Island Power Supply and Accelerated Grid Restoration with Distributed Generation Systems in Case of Large-Scale Blackouts) from 1st October to 27th December 2017 at the University of Applied Science, Augsburg, Germany.
5. Worked as Visiting Faculty at Dr. Sudhir Chandra Sur Degree Engineering College in Kolkata from Aug 2014 to Dec 2014.
6. Worked as Teaching Assistant during master's degree from 1st August 2013 to 31st December 2013 at Netaji Subhas Engineering College, Kolkata.
7. Worked as a Project Assistant in the Department of Electrical Engineering of IIT Madras from 10th April 2012 to 14th July 2012 in signal processing in high voltage engineering.

B. Tech and M. Tech Project Guided

1. Supervisor of B. Tech project; Title: "Real World Anomaly Activity Detection in Surveillance Videos using Deep learning", at KL University (Deemed to be), Vijayawada, 2019.
2. Supervisor of B. Tech project; Title: "Design of LORA data Trans-receiver System", at KL University (Deemed to be), Vijayawada, 2019
3. Guided M. Tech thesis as a co-Supervisor; Title: "Power Quality Pattern Recognition and Classification using the combination of HHT and Fuzzy Logic", June, 2017, at Siksha 'O' Anusandhan University (Deemed to be university), Bhubaneswar, India.

Extra-Curricular Activities

1. Worked as a course coordinator (CC) of Machine Learning Skilling at KL University.
2. Organizing Committee Member in the 2015 IEEE Power, Communication and Information Technology Conference held at Siksha 'O' Anusandhan University (Deemed to be university), Bhubaneswar, India, from 15-17th October 2015.

Administrative Experience

1. Worked as Dept. Library In-charge at KLEF.
2. Dept. In charge of the Faculty Orientation Lecture of KLEF
3. Dept. Coordinator of International wing of KLEF

Workshops

1. The abstract, "Designing Hybrid Crowd+AI Prediction Markets for Estimating Scientific Replicability", has been accepted for presentation at the HMC22 workshop organized by the Australian National University in Paris.

Publications

International Conferences:

1. Tatiana Chakravorti, Vaibhav Singh, Sarah Rajtmajer, Michael McLaughlin, Robert Fraleigh, Christopher Griffin, Anthony Kwasnica, David Pennock, C. Lee Giles, “*Artificial prediction markets present a novel opportunity for human-AI collaboration*” submitted in AAMAS 2023. (The preprint Arxiv link : [\[2211.16590\] Artificial prediction markets present a novel opportunity for human-AI collaboration \(arxiv.org\)](https://arxiv.org/abs/2211.16590))
2. Tatiana Chakravorti. “Classification of Power Quality Disturbances using Adaptive Variational Mode Decomposition based Random Vector Functional Link Network”, (*TENSYMP*), **2019**.
3. Das, Debashreeta, Tatiana Chakravorti, and P. K. Dash. "Hilbert Huang transform with fuzzy rules for feature selection and classification of power quality disturbances." In *Electrical, Computer and Electronics (UPCON), 2017 4th IEEE Uttar Pradesh Section International Conference on*, pp. 439-445, Available in IEEE Xplore, 2017.
4. Chakravorti, Tatiana, and P. K. Dash. "Morphology based fuzzy approach for detection & classification of simultaneous power quality disturbances." In *India Conference (INDICON), 2016 IEEE Annual*, pp. 1-6, Available in IEEE Xplore, 2016.
5. Chakravorti, T., R. K. Patnaik, and P. K. Dash. "A morphological filter-based disturbance detection and classification technique for DFIG wind farm based microgrid." In *Power, Communication and Information Technology Conference (PCITC), 2015*, Available in IEEE Xplore, pp. 979-985, 2015.

International Journals:

1. B. M. Chidvilas, K. S. Pavan, S.K. Kiran, M. M. Kanth, V. S. Bhagavan and T. Chakravorti: “Real-time Anomaly Detection using Tensorflow based RNN Deep Learning Classifier”, *Journal of Advanced Research in Dynamical and Control Systems, Scopus, Impact factor: 0.27, 2020*.
2. Chakravorti, Tatiana, and Penke Satyanarayana. "Nonlinear system identification using kernel based exponentially extended random vector functional link network." *Applied Soft Computing* **89**, 106117, 2020, *SCI, Impact factor: 6.725, Elsevier*.
3. Tatiana Chakravorti, B. N. Sahu and P. K. Dash; “Detection of Islanding and Non-islanding disturbances in Microgrid using Firefly Optimized Variational Mode Decomposition and Robust Regularized Random Vector Functional Link Network” in *Engineering Applications of Artificial Intelligence*, **2019, SCI, Impact factor: 6.212, Elsevier.**
4. Tatiana Chakravorti, N. R. Nayak, R. Bisoi, P. K. Dash and L. Tripathy, “A New Robust Kernel Ridge Regression Classifier for Islanding and power quality disturbances in a Multi Distributed Generation Based Microgrid” in *Renewable Energy Focus, ESCI, (Elsevier), Impact factor: 0.81, 28(2019): 78-99*.
5. Chakravorti, Tatiana, N.R.Nayak, Ranjeeta Bisoi. “A Hybrid hilbert Huang transform and improved fuzzy decision tree classifier for assessment of power quality disturbances in a grid connected distributed generation system.” *International Journal of Power and Energy Conversion, Scopus, Impact Factor: 0.43, (2018)*.
6. Chakravorti, Tatiana, and Pradipta Kishore Dash. "Multiclass power quality events classification using variational mode decomposition with fast reduced kernel extreme

learning machine-based feature selection." *IET Science, Measurement & Technology, SCI, Impact Factor: 1.914, 12, no. 1 (2017): 106-117.*

7. Chakravorti, Tatiana, Rajesh Kumar Patnaik, and Pradipta Kishore Dash. "Detection and classification of islanding and power quality disturbances in microgrid using hybrid signal processing and data mining techniques." *IET Signal Processing, SCI, Impact Factor: 1.5, 12, no. 1 (2017): 82-94.*
8. Chakravorti, Tatiana, Rajesh Kumar Patnaik, and Pradipta Kishor Dash. "Advanced signal processing techniques for multiclass disturbance detection and classification in microgrids." *IET Science, Measurement & Technology, SCI, Impact Factor: 1.914, 11, no. 4 (2017): 504-515.*
9. Nanda, Sarita, Tatiana Chakravorti, and P. K. Dash. "A new Taylor-LMS adaptive filter for parameter estimation of power signals including distributed generation systems." *Australian Journal of Electrical and Electronics Engineering (Taylor & Francis), Impact factor: 0.43, Scopus, 13, no. 3 (2016): 174-194.*
10. Nanda, Sarita, P. K. Dash, Tatiana Chakravorti, and Shazia Hasan. "A quadratic polynomial signal model and fuzzy adaptive filter for frequency and parameter estimation of nonstationary power signals." *Measurement (Elsevier), SCI, Impact Factor: 3.927, 87 (2016): 274-293.*