

Ali Hashemifarzad

Master of Science (M.Sc.), Power Electrical Engineering

Vita

Ali Hashemifarzad is research assistant and Ph.D. candidate in CUTEC, Energie-Forschungszentrum (EFZN) and TU-Clausthal since 2015. He has done his Bachelor in Power Electrical Engineering at Semnan University in Iran. He continued his studies in the field of Energy System Technology in Master's level at TU-Clausthal. During his studies, he has done two internships related to renewable and conventional power plants. His research field is mainly about the simulation of different energy systems, such as decentralized energy systems and inverters. In his doctoral thesis, he works on the electrical load forecasting by using artificial intelligence and Adaptive Neuro-Fuzzy Inference Systems (ANFIS).

Research topic

Electrical Load Forecasting Using Adaptive Neuro-Fuzzy Inference System

This research has tried to propose a new approach toward the problem of load forecasting to provide more accurate results with a lesser error rate compared to the current methods. For this, a methodology based on the Chaos and Concept Drift theories is introduced, in which the Adaptive Neuro Fuzzy Inference System (ANFIS) plays the main role in training and testing the model..

Keywords

Load Forecasting, Chaos Theory, Concept Drift, Artificial Intelligence, ANFIS, Energy System Modelling

Publications

2018 "The Conceptual Design of Auto-Rotary Mono-Wing Decelerators Based on Maple Seeds as an entry decent landing system for Mars explorations", European Rotorcraft Forum, September 2018, TU Delft, Netherlands – 2nd Author

2018 "New approach in Load forecasting based on Concept Drift and ANFIS", International Conference on Sustainable Energy and Environment Sensing (SEES), June 2018 , University of Cambridge , Cambridge city, United Kingdom –Oral presentation

2018 "Impact of Electromobility on the Future Standard Load Profile", 2nd international conference on Energy Economics and Energy Policy, ICEEEP 2018, Barcelona, Spain - Published in Conference Proceeding Journal

2017 "Short and Long Term load forecasting using Artificial Intelligence" 12th SDEWES Conference, Dubrovnik, Croatia – Oral Presentation- Under review

2016 “Case study of CCS Vs. power plant phasing out as solutions for power plant produced CO2 emission control”, 11th SDEWES Conference, Lisbon, Portugal – Published in Conference Proceeding Journal

2016 “Application of heat storage in modern decentralized energy supply systems”, Power to Heat 2016, Goslar, Germany- Published in Conference Proceeding Journal