Nima Bahrami

A creative person with defatigable disposition highly fond of new renewable technologies, trying to utilize the potential of divergent deciplines by conflating them for the purpouse of pushing the barriers of renewable energy science

School of Mechanical Engineering,
Iran University of Science and Technology
(Elm-o-Sanat), Tehran, Iran

n.bahraami@gmail.com

+989220706689

Research Interests

- Distributed Power Networks
- Energy Economics and Blockchains
- Smart Energy Systems
- Sustainable Development

Teaching Experience

- Physics, Teacher, Ghalamchi Institution, Rasht, Iran.
- Teaching Python Programming Language - Self employed
- Teaching MATLAB - Self employed

Education

- M.Sc., Mechanical Engineering, Energy Conversion, Energy Systems, Iran University of Science and Technology, Tehran, Iran. GPA – 16.42/20 — 2020
- B.Sc., Mechanical Engineering, University of Guilan, Rasht, Iran, GPA - 15.19/20. — 2018
- Diploma in Mathematics and Physics Discipline, Prof. Reza Highschool, Rasht, Iran, GPA - 19.18/20. — 2013

Publications

- **N. Bahrami Ziabari** and S. Ghandehariun. "*Economic Assessment of Solar-based Hydrogen for Methanol Production*" Energy Equipment and systems (2020).
- **N. Bahrami Ziabari** and S. Ghandehariun. "*Implementing Machine Learning Algorithms to Predict Wind Speed and Water Evaporation for a Hybrid Small-scale Power Generation comprising Floating System*" to be submitted. (Target journal: Renewable energy)
- **N. Bahrami Ziabari** and S. Ghandehariun. "*Game Analysis on Government Subsidies in Renewable Hybrid Power System Cross Different Regions of Iran*" in preparation.
- **N. Bahrami Ziabari** and S. Ghandehariun. "*Design and Optimization of a Solar-Wind Micro Hybrid Power Station Coupled with Pumped Hydro Energy Storage*" to be submitted. (Target journal: Energy conversion and management)

Notable Projects

- Design and optimization of a hybrid PV/wind/hydro system integrated with Thermal energy storage/reverse osmosis water desalination/hydrogen production and predicting the sustainability using ANN , MSc Thesis
  - *Designed and simulated a system comprising systems listed above, and using real data of household power demand optimized the system utilizing 4 different meta-heuristic algorithms and the performance of the system is analyzed and modeled an MLP class ANN to predict the sustainability of the system based on the independent variables.*
- Investigating the implementation of Blockchain Technology in Energy Sector in Order to Reduce Household Power Consumptions by Monetary Incentives, MAPNA Industrial Group, Mar. 2020
  - *Explored the effect of the transition to distributed power systems on the power consumption of households based on different whitepapers in the energy sector of blockchain technology for a case study of Iran.*
- Investigating the Feasibility of Power Storage System Based on Construction Debris, MAPNA Industrial Group, Aug. 2020
  - *Effectively inquired about the potential of using construction debris as energy storage medium for gravitational energy storage system for rural areas.*
- Programming a Wind Power Plant for Hydrogen and Methane Production and Multi-Objective Optimization using Equilibrium Optimizer (EO) Meta-Heuristic Algorithm, Energy System's Course, Oct. 2020
  - *Analyzed the energy and exergy efficiencies of the system which comprises wind turbine, PEM electrolyzer, and methanation unit which uses Sabatier reaction, by means of EO algorithm a multiobjective optimization to maximize exergy efficiency and methane production.*
- Thermal Design and Analysis of Smart Camera Casing used for Smart Parking System, Padideh Merila Knowledge Enterprise, Jan. 2019 - Feb. 2019
  - *Modeled an NVIDIA jetson nano DEV kit by Solidworks and analyzed from a thermal perspective. This prior kit is mounted inside a plastic housing which uses a heat sink for cooling.*
- Investigating the effect of wind turbine aesthetics on tourism industry and the trade-off between performance and costs, Nov 2019
  - *Design a questionnaire to collect data and opinion of people on the effect of the wind turbine on their decisions to choose between destination, which resulted in spectacular understandings*
- Design and Manufacturing 3-DOF Camera Slider for shooting Time-lapse Videography with the ability to focus on an object. Bachelor's degree thesis, Supervisor: Dr. Reza Jamilnia, Feb. 2017 - Aug. 2017
  - *Built A 3 degree-of-freedom camera slider and by using Arduino the ability to control the shooting timelapse videos by the means of Blink app on iOS is achieved.*

Working experiences

- Radiator Casting and Assembly Section, 1 month Internship, Iran Radiator Compony, Rasht, Iran
  - *I applied for internship in Iran Radiator Co. as it is one of the biggest and successful compony in Iran and worked in the field of casting and exporting radiators*
- Full Farm Visit, 1 week visitor, Rafsanjan Solar Farm, Rafsanjan, Iran
  - *As a fervid fan of solar energy, I applied to visit Rafsanjan Solar farm to observe the processe involved in person. I inquired into vast spectrum of objectives from cooling to future prospects.*
- Machine learning, 3 months Internship, Padideh Merila Co. , Tehran, Iran
  - *Padideh Merila is an enterprise company that works on a new platform that brings smart parking into life by the means of hardware and software. I was too favored to learn and improve my programming skills in the field of machine learning as an intern with this sagacious team*

Volunteering Activities

- Member of Imam Ali Popular Student Relief Society (IAPSRS) - Teaching to those who can not afford a proper education

Language

- Persian
- English (Toefl & GRE to be taken)

Honors

- Ranked 259 in Master's National Enterance Exam (Top 1%)
- Gold medal in Skate Provincial Competition

Skills

Programming Github

- Python
  - Keras, SciKit-Leran, numpy
- MATLAB
- C++
- HTML
- Javascript
- CSS

Engineering

- PVSyst
- HOMER
- OpenLCA
- Excel
- Solidworks

Soft

- Systematic thinking
- Team work
- Critical thinking
- Adaptability
- Problem solving

References available upon request