

CURRICULUM VITAE



Name: Arash

Surname: Zargham Nejad

Gender: Male

Marital Status: Single

Date of Birth: August 30th, 1985

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Education

M.S. Master of Science in **Electrical Engineering** (Power)
(Sep. 2007-Feb. 2010)
Faculty of Electrical and Computer Engineering (ECE)
University of Tehran, Iran.
Thesis Title: Power Splitting Strategies for Hybrid Electric Vehicle Based on Drive Cycle **(18.25/20)**
GPA: 15.96/20

B.S. Bachelor of Science in **Electrical Engineering** (Power)
(Sep. 2003 – Sep. 2007)
Faculty of Electrical and Computer Engineering (ECE)
University of Tehran, Iran.
Thesis Title: Eccentricity fault diagnosis in Permanent Magnet Motor **(19.5/20)**
GPA: 16.14/20

Publication

Journal:

B. M. Ebrahimi, J. Faiz, M. Javan-Roshtkhari, A. Zargham Nejad, "Static Eccentricity Fault Diagnosis in Permanent Magnet Synchronous Motor Using Time Stepping Finite Element Method", *IEEE Trans. Magnet*, Vol. 44, Issue. 11, Part 2, pp.4297-4300, 2008.

Conference:

A. Zarghamnejhad, B. Asaei, "A fuzzy-Genetic Algorithm Approach for finding new HEV Control Strategy Idea", in Proc. Tehran. **IEEE Conf. PEDSTC**, Feb 17-18, Tehran, 2010.

Research Interests

- Hybrid Electrical Vehicle and Plug-in (Control Strategy, impact on power grid, ...)
- Control Strategy and Power management in Multi-Sources Energy Problem by means of moderns Optimization Methods (Genetic Algorithm, Fuzzy Logic, Neural Network, H-infinite, ...)
- Non-invasive fault diagnosis of Electrical Machines (by means of Signal Processing, Pattern Recognition, Neural Network, ...)
- Renewable Energy
- Power Network Study
- Heuristic Optimization Methods

Language Skill

Farsi : Mother Tongue

English: Fluent (IELTS, 17th Sep. 2011: Ave=6.5) , (GRE, 19 Nov. 2011: Verb:142, Quant: 163)

Turkish: Father Tongue

Familiar with Arabic mostly and a little Deutsch

Software Skills

- Solid Experienced in programming with **MATLAB** (Powersim, GA, Fuzzy, General Coding, GUI, ...)
- **Advisor** (Vehicular Modeling Software)

- **OPERA** (FEM Software)
- Professional Software: **ETAP, PSCAD, DXP**, PSPICE, ORCAD, Simulink, CALCULUX, BASCOM,
- General Software: MS Office (Excel, Word, PowerPoint, Outlook), AutoCAD, Windows
- Programming: C/C++, PHP, HTML, and Microcontroller Base Programming (**AVR, PIC, ...**)

Honor and Awards

- Top **0.05%** of 450,000 participants (**194th**) of nationwide university entrance exam, summer 2003
- Top **0.7%** of 10,000 participants (**76th**) of nationwide university entrance exam for M.S. of Electrical, summer 2003
- Top 2.5% of 4000 participant (**107th**) of nationwide Physics Olympiad

Job History (4 years experience in Oil & Gas Electrical Networks)

- Sep. 2007 – Mar 2009, **Project Engineer** in an **international project** in Oman, **Hirbodan Co.** (EPC Contractor of Oil/Gas/Petrochemical/Power Plants)
- Mar. 2009 – Mar. 2010, **Electrical Detail Designer**, Payesh Tarh Tabnak (Subcontractor of **Tehran Jonoob Co.**) (Engineering Consultant of Oil/Gas/Petrochemical/Power Plants)
- Mar. 2010 – Up to now, **Electrical Detail Designer**, Fath Niroo Pars (Subcontractor of **MAPNA** Group)

Internship

- July. 2006 – Sep. 2006, Iran Transfo. Manufacture, as Intern in **High Voltage Laboratory** and Manufacture Line

Hobbies

- Swimming
- Playing Oud (an Arabic Music Instrument), and Iranian Percussion (Daf, Tonbak, Kouze, ...)
- Being with my Music Band ((refer to our band website to listen one of our recordings: <http://kohanemoaser.blogfa.com/>), Listening Music, Teaching Music,
- Surfing the Internet

List of Most Important Projects that I involved during my studies and profession

- Modeling of a Parallel Hybrid Electric Vehicle (HEV) by **ADVISOR** and **MATLAB**. It was my **M.S. Thesis** and contributed to a new approach in control strategy of HEV. It is indexed in IEEE as I mentioned in publication. I develop a **genetic algorithm** code by myself and connected it with advisor to optimizing a **fuzzy rule based** control strategy.
- Modeling of a PM motor in **OPERA** (a **finite element** software), we introduced a new electrical index to diagnose a mechanical fault (eccentricity fault). As I mentioned in publication clause, It is published in **Magnet Trans. of IEEE**.
- **Wireless data monitoring** of 16 Pump Stations of cane farm, Project dimension was about **10000 hectare!** We develop a wireless data monitoring system of Electrical Pump to minimize the damage that would be occurred because of late of every day checking and human operator mistakes. We made the **prototype successfully!**
- **Calibration** of high voltage measuring instrument of a Cable manufacturing high voltage laboratory.
- System Study with **ETAP** for “Bandar Abbas Gas Condensate Refinery Project” (One of the **top three** enormous projects over the oil and gas industry history of Iran).
- **Case Study** for sizing of NGR for a developing substation (Akhtar Substation) of “**South Pars Gas Field** Development Phases 15&16 Onshore Facilities project” by **ETAP** and **MATLAB**

References

My Academic References

- B. Asaei (My M.S. Thesis Supervisor), basaei@ut.ac.ir,
- J. Faiz (My B.S. Thesis Supervisor), jfaiz@ut.ac.ir,
- B. Shauegani Akmal, (My Supervisor of Internship), shayegani@ut.ac.ir ,

My Job References

- H. Darvish, Engineer manager (Hirbodan EPC Co.), Darvish@hirbodan.com, Tel: (+98) 9122838075
- H. sanjari, Head of Engineering services (Kharg Petro. Co.), sanjari@khrpc.com, Tel: (+98) 9125344467
- M. Rezaei, Head of Electrical (Fath Niroo Pars), mr.rezaei@gmail.com, Tel: (+98) 9122015232