



Mahbod MoeinJahromi

Assistant Professor

College: Faculty of Technology and Engineering

Department: mechanical engineering

Education

Degree	Graduated in	Major	University
BSc	2010	Mechanical Engineering (Solid Mechanics)	Sistan & Baluchestan University
MSc	2012	Mechanical Engineering (Energy Conversion)	Amirkabir University of Technology
Ph.D	2018	Mechanical Engineering (Energy Conversion)	Amirkabir University of Technology

Employment Information

Faculty/Department	Position/Rank	Employment Type	Cooperation Type	Grade
Jahrom University	Head of Mechanical Engineering Department	Tenure Track	Full Time	

Work Experience

- 1- Elite soldier of Iran New Energy Organization (SANA) 2013(May)-2014(May)
- 2- Expert in charge of research and development of Bahman Motor Company 2014(July)-2019(Feb.)
- 3- Part-Time lecturer at Amirkabir University of Technology and Jahrom University 2010(Jan.)-2021(Sep.)
- 4- Assistant Professor of Mechanical Engineering, Jahrom University 2021(Sep.)-up to now
- 5- Director of Mechanical Engineering Department since 2021(Mar.)-up to now
- 6- Member of Jahrom University Publishing Council since 2019(Dec.)-up to now

Awards

Academic award from National Elites Foundation, named Dr. Kazemi-Ashtiani Award as a faculty member of Jahrom university (2019-2020).

Distinguished Ph.D. student (Top 5% of class) of the academic year 2018 (Thermo-Fluid) Mech. Eng. Dep.

Admission as Exceptional Talents without examination admission regulations in Ph.D. in 2013.

Elite Soldier: benefit from the facilities of the National Elites Foundation to fulfill a research project in Renewable Energy Organization as a substitution of military service (2013).

Distinguished M.S. student (Top 5% of class) of the academic year 2012 (Thermo-Fluid) Mech. Eng. Dep.

Awarded for the Top Rank M.S. Thesis of academic year 2012 in Amirkabir University of Technology, Iran.

Top Rank (1st) B.S. student of the academic year 2010 (Solid-Mechanics) Mech. Eng. Dep.

Outstanding student in the 15th mechanical engineering Olympiad between universities in 7th hub in Iran (2010)

The reviewer of Energy Conversion and Management Journal (Q1 and high-rank ISI journal with IF= 8.208),

Subjects Taught

- 1- Renewable energies, especially hydrogen energy and fuel cell systems
- 2- Heating-photovoltaic systems
- 3- Reverse osmosis module systems and condensing membranes for saltwater treatment

Executions And Scientific Activities

- 1- Optimization and modification of performance drop created in high-temperature polymer membrane fuel cell in Iran New Energy Organization (SANA)
- 2- Presenting a simulation model of performance calculator for Zinc-air fuel cell for the New Energy Organization of Iran
- 3- Holding a fuel cell training workshop in the second fuel cell conference of Khajeh Nasir University of Technology
- 4- Presenting a degradation model of polymer membrane fuel cell deterioration due to cyclic loading to the German ZSW Institute in the form of research collaboration
- 5- Feasibility study of Mapna entering the fuel cell business, a project carried out for Mapna under the supervision of Dr. Mohammad Jafar Kermani
- 6- Research, investigation, and feasibility study of the combination of desalination processes by

reverse osmosis and membranes desalination to increase the efficiency of seawater desalination systems and freshwater production in Makran beaches (Employer = Eghlim Pahlavan Company)

Course Topics

- 1- Heat transfer
- 2- Principles and foundations of thermodynamics
- 3- Fluid mechanics
- 4- Engineering mathematics
- 5- Renewable energies and its applications
- 6- Thermodynamic laboratory

Workshops

Fuel cell training workshop in the second hydrogen and fuel cell conference at Khajeh Nasir University of Technology

Journal Membership

- Reviewer of ISI Q1 high-rank Journal of [Energy Conversion and Management](#).
- Reviewer of ISI journal of [Applied Fluid Mechanics](#)
- Reviewer of ISC journal of [Challenges in Nano and Micro Scale Science and Technology](#)
- Reviewer of ISC journal of [Modares Mechanics \(MME\)](#), Tarbiat Modares University.
- Reviewer of ISC journal of [Amirkabir Journal of Mechanical Engineering](#), Amirkabir University of Technology.
- Reviewer of ISC journal of the [Scientific-Research Journal of Mechanical Engineering](#), University of Tabriz, University of Tabriz.

Papers in Conferences

1. محمدجعفر کرمانی , مونس پورمحمدی اینانلو , محمدجواد مدیرشانه چی , مهبد معین جهرمی, بررسی اثر توزیع کننده های جریان کانال و فوم بر عملکرد پیل سوختی غشا پلیمری, سی و یکمین همایش سالانه بین المللی انجمن مهندسان مکانیک ایران و نهمین همایش صنعت نیروگاهی ایران, شماره صفحات ۶-۱, تهران, ۱۴۰۲, ۱۹ و ۲۰
2. Hadi Heidary , Robert Steinberger , Wilckens , Mahbod Moein Jahromi , Numerical Simulation of Polymer Electrolyte Fuel Cells with Non-Homogenous Metal Foam as a Flow Distributor , EFCF 2023: Low-Temp. Fuel Cells, Electrolysers & H2 Processing , pp. 1-8 , Lucerne Switzerland , 2023 07 04.
3. M. Moein Jahromi , M.J. Kermani , M. Abdollahzadeh , CFD electrochemical modeling of the cathode electrode of PEM fuel cell , The 28th Annual International Conference of Iranian Society of Mechanical Engineers-ISME2020 , Tehran , 2020/05/27.
4. M. Moein Jahromi , M.J. Kermani , S. Movahed , Degradation Prediction of PEMFC Catalyst Layer

Using an Empirical Based Model ,The Second Materials Challenges for Fuel Cells and Hydrogen Technologies ,2015.

5. M. Moein Jahromi ,& M.J. Kermani ,Mass Transport and Water Management in Polymer Exchange Membrane Fuel Cell ,Fuel Cell 2012 Science & Technology ,2012.

6. M. Moein Jahromi ,& M.J. Kermani ,Development of Homogeneous to Agglomerate Model for the Computation of Cathode Catalyst Layer of PEM Fuel Cells ,International Conference On Renewable Energy: Generation and Applications (ICREGA 2012) ,2012.

7. M. Moein Jahromi ,& M.J. Kermani ,Modeling of Nafion 115 Membrane and GDL in Anode and Cathode Sides of a PEMFC ,20th Annual International Iranian Mechanical Engineering Conference ,2012.

Papers in Journals

1. MJ Kermani et al.,Application of a foam-based functionally graded porous material flow-distributor to PEM fuel cells,Energy,Vol. 254,pp. 124230,2022 09 01.
2. M Moein et al.,Evaluation of nanostructured GNP and CuO compositions in PCM-based heat sinks for photovoltaic systems,Journal of Energy Storage,Vol. 53,pp. 105240,2022 09 01.
3. Hossein Rahmadian-Koushkaki , Saeed Rahmadian , Mahbod Moein-Jahromi , Kamaruzzaman Sopian,Performance evaluation of concentrated photovoltaics with phase change materials embedded metal foam-based heat sink using gradient strategy,International Journal of Energy Research,pp. 1-26,2022 4 25.
4. Vahab Okati et al.,Thermo-economical and environmental analyses of a Direct Contact Membrane Distillation (DCMD) performance,Journal of Cleaner Production,Vol. 340,pp. 130613,2022 1 25.
5. MJ Kermani et al.,Development of a variable-porosity metal-foam model for the next fuel cells flow-distributors,International Journal of Hydrogen Energy,Vol. 47,pp. 4772-4792,2022 1 22.
6. S Rahmadian et al.,Performance investigation of inclined CPV system with composites of PCM, metal foam and nanoparticles,Solar Energy,Vol. 230,pp. 883-901,2021 12 1.
7. M. MoeinJahromi ,& M.J. Kermani,Three-dimensional multiphase simulation and multi-objective optimization of PEM fuel cells degradation under automotive cyclic loads,Energy Conversion and Management,Vol. 231,pp. 113837,1 March 2021.
8. M. MoeinJahromi ,& H. Heidary,Durability and economics investigations on triple stack configuration and its power management strategy for fuel cell vehicles,International Journal of Hydrogen Energy,Vol. 46,pp. 5740-5755,2021 01 27.
9. Mahbod MoeinJahromi , Saeed Rahmadian , Saleh Barzegarloo kahi.Investigation of heat absorber geometry effect using nanofluid and Microencapsulated PCM on the photovoltaic-thermal (PV/T) panel performance.Journal of Mechanical Engineering,۲۰۲۰.
10. M. Moein Jahromi , M.J. Kermani , S. Movahed,Degradation forecast for PEMFC cathode-catalysts under cyclic loads,Journal of Power Source,Vol. 359,pp. 611-625,2017.
11. M. Moein Jahromi , S. Movahed , MJ. Kermani,Numerical Study of the Cathode Electrode in the Microfluidic Fuel Cell Using Agglomerate Model,Journal of Power Source,Vol. 277,pp. 180-192,2015.
12. M. Moein Jahromi ,& MJ. Kermani,Performance prediction of PEM fuel cell cathode catalyst layer using agglomerate model,International Journal of Hydrogen Energy,Vol. 38,pp. 17954-17966,2012.
13. Mahbod MoeinJahromi , Saeed Rahmadian , S Barzegarloo Kohi.Jahromi [PDF] from tabrizu.ac.ir Investigation of heat absorber geometry effect using nanofluid and Microencapsulated PCM on the photovoltaic-thermal (PV/T) panel performance.Journal of Mechanical Engineering University of Tabriz,۵۱ شماره ۴, شماره صفحات ۴۱۳-۴۲۲,۲۰۲۰.

Books

1. -PEM Fuel Cells Chapter 14 - Automotive applications of PEM technology