# HASSAN ALI OZGOLI

Associate Professor

**IRANIAN RESEARCH ORGANIZATION FOR SCIENCE AND TECHNOLOGY (IROST)**

## PROFILE

Around 14 years' experience in Mechanical and Energy Engineering, including Sustainable Energy Development, Smart Grids, Renewable Energy Technologies, Energy Modelling, Energy Efficiency, Energy Management systems, Software Development and Energy Optimization in Buildings and Industry.
Proposing and implementing several research and practical projects to meet sustainable energy goals.
Publishing extensively in renewable energy, alternative fuels, techno-economic assessments, energy conversion, energy storage.

## LANGUAGES

**English:** Professional
**Persian:** Native

## CONTACTS


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**LinkedIn:**
https://www.linkedin.com/in/hassan-ali-ozgoli-96655942/

**Google Scholar:**
https://scholar.google.com/citations?hl=en&user=BFPU4ucAAAAJ


## EDUCATION

2007 - 2012 **Doctor of Philosophy (PhD), Energy Engineering**
**Science and Research Branch, Islamic Azad University, Tehran, Iran**
**Thesis title:**
Modelling SOFC & GT Integrated-Cycle Power System using Auxiliary Systems with Energy Consumption Minimizing Target to Improve System Performance.
**Focus topics:**
- Energy Modelling of Biomass Fluidized Bed Gasifier, Gas Turbine, Solid Oxide Fuel Cell and Compact Heat Exchangers
- Process Modelling (Mass and Energy Balance, Thermochemical and Electrochemical Conversion)
- Energy and Cost Optimization in Sustainable Technologies,
- Economic Analysis, Environmental Considerations, Smart Grids.

2004 - 2007 **Master of Science (MSc), Energy Engineering**
**Science and Research Branch, Islamic Azad University, Tehran, Iran**
**Thesis title:**
Non-linear Modelling Algorithms and Reproducible Quantitative Analysis in Fuel Cells and Integration with Photovoltaic and Electrolysis Systems (using GAMS)

1999 - 2004 **Bachelor of Science (BSc), Mechanical Engineering**
**Islamic Azad University, Takestan Branch, Takestan, Iran**

## WORK EXPERIENCE

### (i) Academic

2015–Present **Faculty Member - Iranian Research Organization for Science and Technology (IROST)**
Department of Mechanical Engineering
- Execute major projects with the aim of technology development nationally and internationally.
- Hold Research-Oriented Ph.D. Programs, and organize short-Term educational workshops and courses.

2021-2022 **Deputy Director - Iranian Research Organization for Science and Technology (IROST)**
Science and Technology Park
- Provide support for the development of high priority technologies, and offer consultations for evaluation, commercialization, and marketing of these technologies nationally and internationally.

2018–2021 **Director General - Iranian Research Organization for Science and Technology (IROST)**
Administration of Industry Liaison and Technology Services
- Making strong and permanent relationship between researchers and pertained industrial sectors. Carry out strategic research and analyze vulnerabilities to the national technology development system.

2017–2018 **Head of Energy Conversion and Productivity Research Group - Iranian Research Organization for Science and Technology (IROST)**
Department of Mechanical Engineering

## COMPUTER SKILLS

**General**: Microsoft Office (Word, Excel, PowerPoint)
**Process Modelling**: Cycle-Tempo, Aspen HYSYS, Thermoflow
**CFD Simulation**: ANSYS Fluent, COMSOL Multiphysics
**Energy Modelling**: EES, PSCAD, PVSOL, RETScreen, EnergyPlus
**Mathematical Programming**: MATLAB, Python, GAMS
**General Programming Languages**: C++, C#

## PROFESSIONAL MEMBERSHIP

- Member of the Technical Committee for the Arbitration of Mechanical and Energy Engineering of the **Khwarizmi International Award** (2015-Present);
- Board Member of the **IROST Science and Technology Park** (2022);
- Member of the **Iran Energy Association** (2012-Present);
- Member of Energy Management and Incinerators **Standards** (2016-Present).

## HOLDING WORKSHOPS & TRAINING COURSES

- Energy Management System Standard, based on ISO 50001;
- The Necessity for Energy Management and Saving and the Role of Renewable Energy Use in Sustainable Development;
- Biomass and BioEnergy.

2013–Present **Invited Lecturer - Tehran Science and Research Branch, Islamic Azad University**

2008 **Invited Lecturer - Takestan Branch, Islamic Azad University**
Department of Mechanical Engineering

2005–2013 **Invited Lecturer - University of Applied Science and Technology**

### (ii) Industrial

2022-Present **Technology Development Consultant** – **Bonmano Co.**
Research and Development Department

2014-Present **Senior Advisor** – **Parse Energy Co.**
Business Development Working Group

2012-Present **Senior Development Manager** – **Energy House Co.**
Department of Energy Management

## ATTENDANCE AND LECTURES IN THE INTERNATIONAL TECHNICAL TRAINING PROGRAMS

2021 ❖ Alliance of International Science Organizations (ANSO) Training on **Sustainable Development and Leadership Enhancement**, Commission on Science and Technology for Sustainable Development in the South (COMSATS), China, online.

2020 ❖ Regional Workshop on Technology Transfer - **Renewable Energy Technologies for Climate Change Mitigation**, Asian and Pacific Centre for Transfer of Technology (APCTT) of United Nations ESCAP, Bangkok, Thailand, online.

2019 ❖ WAITRO Capacity Building Program on **Solar Thermal Technology for Industrial Application**, Shah Alam, Selangor, Malaysia.

2019 ❖ International Training Workshop on **Technopreneurship for Developing Countries**, Prepared by NAM S&T Centre, Kuala Lumpur, Malaysia.

2016 ❖ APEC (Asia-Pacific Economic Cooperation) Training Workshop on **Development and Application of Solar Technologies and Products**, Kunming, China.

2016 ❖ **Compressed Air System Optimization** User Training Course, United Nations Industrial Development Organization (UNIDO), Tehran, Iran.

2015 ❖ Asia Pacific Regional Workshop on **Biomass Energy Resource Assessment**, organized by Asian and Pacific Centre for Transfer of Technology (APCTT) – (International Renewable Energy Agency (IRENA), Bangkok, Thailand.

2015 ❖ Biomass Open Research Forum, **Biomass Resource Assessment for ASEAN+6 Countries**, organized by Asian and Pacific Centre for Transfer of Technology (APCTT) – (International Renewable Energy Agency (IRENA), Bangkok, Thailand.

2015 ❖ A Brief Review (Theory and Application) within **En.M.S. According to ISO 50001:2011**, Iran Energy Association, Tehran, Iran.

2013 ❖ **Technology of Extracting Energy from Biomass Sources** (Iran Energy Association), Tehran, Iran.

2012 ❖ **Energy Management Systems & Productivity** (Iran Energy Association, Tehran, Iran.

2010 ❖ **Management Systems and Energy Management** (TUV Academy), Tehran, Iran.

2004-2008 ❖ **Computer Operation, Computer Programming and Data Base Design**, Iran Technical & Vocational Training Organization.

## THESES SUPERVISOR / ADVISOR

**PhD Theses Supervisor**: **7**

**PhD Theses Advisor**: **2**

**MSc Theses Supervisor**: **14**

**MSc Theses Advisor**: **6**

## RESEARCH GRANTS

**Participation in Research Grants**: **10**

## EDUCATIONAL DEVELOPMENT

- Administrating the Design and Development of Iran **National Internship System** for University Students;
- Administrating the Design and developing of **Energy Management Application**.

## COOPERATION WITH INDUSTRIES

- Conventional Power Plants;
- Renewable Power Plants;
- Mining Industry;
- Gas Turbine Manufacturers;
- Gas Refinery;
- Heating, ventilation, and air conditioning (HVAC).

## PATENTS

Jun. 2016 — 1. An advanced integrated gas turbine system consisting of cascading humidifier and fluidized bed biomass gasification for use in thermal power plants.

Sep. 2017 — 2. Augmentation of gas turbine energy efficiency using convergent-divergent nozzle as cooling system.

## REVIEWING EXPERIENCES

2012-Present — The Reviewer of Several International Scientific **Journals (ISI & ISC)**. More than 100 papers have been reviewed.

2012-Present — The Reviewer of Several National and International Scientific **Conferences**.

2015-Present — The Reviewer of the Mechanical and Energy Engineering of the **Khwarizmi International Award**. Around 50 plans have been reviewed.

2015-Present — Reviewer of the **Patents** in the field of Mechanical and Energy Engineering. Around 90 proposals have been reviewed.

2017-Present — The Reviewer of **Iran National Science Foundation** for Investigation of Researchers and Companies.

2015-Present — The Reviewer of **Technological Capabilities** of the Tech Companies.

## KEYNOTE SPEAKER

2022 — 2022 Int'l Conference on Renewable Energy and # Energy Systems (REES 2022), April 22-24, Suzhou, China.

2016 — Regional Expert Meeting on Renewable Energy Focusing on Microalgae Technology Using Ocean Resources including Solar and Fuel Cell, 31st October-1st November, Zahedan, Iran.

2016 — Sixth National Conference on Energy Management and Environment, 22 December, Tehran, Iran.

## AWARDS & ACHIEVEMENTS

2004-2012 — **Top 1%** of Ph.D. and MSc Students in Energy Engineering Department, Science and Research Branch, Islamic Azad University.

2017 — **Best Reviewer** of the 1st International Conference on Energy Management and Technology, 21st February, Tehran, Iran.

2018 — **Best Oral Presentation** in the 3rd International Conference on Mechanical and Aerospace Engineering, Tehran, Iran.

2016 — **Best Oral Presentation** in the First International Comprehensive Competition Conference of Engineering Sciences in Iran, 8th September, Anzali, Iran.

2012 — **Best Oral Presentation** in the 3rd International Conference on Sustainable Future for Human Security (SUSTAIN) 2012, 3-5 November, Kyoto, Japan.

## COMMERCIALIZATION SKILLS

Patent Law - World Intellectual Property Organization (WIPO);
Branding;
Strategy and Planning;
Value Assessment;
Team Building and Strategic Alliances;
Business Development.

## COMMUNICATION SKILLS

Team Work
Presentation
Making Collaborations
Teaching
Daily Supervisor

## OTHER INFORMATION

Social
Organized
Creative
Adaptability
Attention to Details
Precise
Able to Work Independently

## TEACHING EXPERIENCE

2016–Present

### Postgraduate Courses (Ph.D. & M.Sc.)

**Department of Mechanical Engineering, Iranian Research Organization for Science and Technology (IROST)**

- Energy Systems Analysis
- Turbomachines
- Optimization of Energy Streams
- Energy Modeling
- Advanced Energy Conversion Systems
- Design of Combined Heat and Power Systems

2012-Present

**Department of Energy engineering, Science and Research Branch, Islamic Azad University**

- Energy Systems Analysis
- Thermal Systems Design
- Energy Modeling
- Advanced Mathematical Programming
- Energy Intensive Industries

2008

### Undergraduate Courses (B.Sc.)

**Department of Mechanical Engineering, Takestan Branch, Islamic Azad University**

- Fluid Mechanics

## RESEARCH INTERESTS

**Biomass Energy** (Gasification of Biomass, Waste and Coal Fuels);

**Energy Systems Modelling and Optimization** in Buildings and Industry;

**Smart Grids** (Modelling and Simulation)

**Integration of Energy Systems** (District Heating, Distributed Generation, HVAC systems, Techno-Economic Assessments);

**Low-Carbon Technologies** and Environmental Considerations;

**Economic Analysis** of the Energy Systems;

**Mathematical Programming**, **Process Modelling** and **Simulation** by Commercial Software;

**Computational Fluid Dynamics (CFD)** (Thermochemical Conversion, Electrochemical Modelling and Analysis);

**Solar Energy** Systems and **Fuel Cells** (Simulation, Modelling and Engineering design);

**V**anadium **R**edox **f**low **B**atteries (VRfB), Energy Storage Systems.

## REFERENCES

**1.** Hossein Ghadamian (Ph.D.), Associate professor, Department of Energy, Materials and Energy Research Center (MERC), Tehran, Iran, Phone number: Phone number: +98(912)2541353, E-mail: h.ghadamian@merc.ac.ir, (supervisor professor of the candidate MSc. & Ph.D. theses)

**2.** Foad Farhani (Ph.D.), Associate professor, Department of Mechanical Engineering, Iranian Research Organization for Science and Technology (IROST), Tehran, Iran, Phone number: +98(912)3840104, Email: f.farhani@irost.ir, (head of department)

**3.** Sara Deilami (Ph.D.), Senior Lecturer, School of Engineering, Macquarie University, Sydney, Australia, Phone number: +61-421948954, E-mail: sara.deilami@mq.edu.au, (research project cooperator)

## RESEARCH PUBLICATIONS

### (I) Journal Papers

2022 "Comparative Analysis of a Dual Kalina Cycle Configuration for Heat Recovery from Boiler Stack in a Steam Power Plant", M. R. Shahrokhi, H. A. Ozgoli, F. Farhani, *Environmental Progress & Sustainable Energy*, e13900.

2022 "Investigating a Set of Novel Heat Exchanger Configurations of a Heat Recovery Steam Generator to improve the Energy Efficiency of Combined Cycle Power Plant", M. Rasooli Mavini, H. A. Ozgoli, S. Safari, *Journal of Renewable Energy and Environment*, Accepted.

2022 "Evaluation of performance improvement of the combined biomass gasifier power cycle using low-temperature bottoming cycles: Organic Rankine cycle, Kalina and Goswami", M. Hosseinpour, H. A. Ozgoli, A. Haji Seyed Mirzahosseini, A. H. Hemmasi, R. Mehdipour, *Environmental Progress & Sustainable Energy*, e13855.

2022 "Energy Analysis of Utilizing Biomass Gasification to Partially Substitution Fossil Fuels in an IBG-GT-ST-Kalina Cycle." M. Hosseinpour, H. A. Ozgoli, A. Haji Seyed Mirzahosseini, A. H. Hemmasi, R. Mehdipour, *Journal of Renewable Energy and Environment*.

2021 "A Critical Review of Biogas Production and Usage with Legislations Framework across the Globe." S. Abanades, H. Abbaspour, A. Ahmadi, B. Das, M. A. Ehyaei, F. Esmaeilion, M. El Haj Assad, T. Hajilounezhad, D. H. Jamali, A. Hmida, H. A. Ozgoli, S. Safari, M. AlShabi & E. H. Bani-Hani*, International Journal of Environmental Science and Technology*.

2021 "Machine Learning-Based Operational Control Framework for Reducing Energy Consumption of an Amine-Based Gas Sweetening Process." M. Moghadasi, H. A. Ozgoli, F. Farhani, *International Journal of Energy Research*, 45, 1055-1068.

2021 "Steam Consumption Prediction of a Gas Sweetening Process with Methyldiethanolamine Solvent using Machine Learning Approaches." M. Moghadasi, H. A. Ozgoli, F. Farhani, *International Journal of Energy Research*, 45, 879-893.

2021 "Integration of Solar Dryer with a Hybrid System of Gasifier-Solid Oxide Fuel Cell/Micro Gas Turbine: Energy, Economy, and Environmental Analysis." S. Safari, A. H. Ghasedi, H. A. Ozgoli, *Environmental Progress & Sustainable Energy*, 40(3), e13569.

2020 "Integration of a Biomass-Fueled Proton Exchange Membrane Fuel Cell system and a Vanadium Redox Battery as a Power Generation and Storage System." H. A. Ozgoli, S. Safari, M. H. Sharifi, *Sustainable Energy Technologies and Assessments*, 42, 100896.

2020 "Simulation of a GEF5 Gas Turbine Power Plant Using Fog Advanced Cycle and a Systematic Approach to Calculate Critical Relative Humidity." S. M. Arabi, H. Ghadamian, M. Aminy, H. A. Ozgoli, B. Ahmadi, M. Khodsiani, *International Journal of Engineering*, 33, 2356-2364.

"Modeling and Investigation of Gas Turbines Heat Recovery in the Semnan Oil Pumping Station for Heating Gas-Oil to Reduce Energy Consumption of Pumping." M. Shahabi, H. A. Ozgoli, A. Akbarnia, *Journal of Energy Management and Technology*, 4, 21-27.

2020 "Energy Modelling and Techno-Economic Analysis of a Biomass Gasification-CHAT-ST Power Cycle for Sustainable Approaches in Modern Electricity Grids." S. Hosseinpour, A. Haji Seyed Mirzahosseini, R. Mehdipour, A. H. Hemmasi, H. A. Ozgoli, *Journal of Renewable Energy and Environment*, 7(2), 43-51.

2020 "Electrochemical Modeling and Techno-Economic Analysis of Solid Oxide Fuel Cell for Residential Applications." S. Safari, H. A. Ozgoli, *Journal of Renewable Energy and Environment*, 7(1), 40-50.

2019 "Energy Performance Analysis of GE-F5 Gas Turbines at Off-design Conditions by Applying an Innovative Convergent– Divergent System for the Inlet Air Cooling." S. M. Arabi, H. Ghadamian, M. Aminy, H. A. Ozgoli, B. Ahmadi, M. Khodsiani, *Measurement and Control*, 52, 1508-1516.

2019 "The Energy Analysis of GE-F5 gas Turbines Inlet Air–Cooling Systems by the Off-design Method." S. M. Arabi, H. Ghadamian, M. Aminy, H. A. Ozgoli, B. Ahmadi, M. Khodsiani, *Measurement and Control*, 52, 1489-1498.

2019 "Modeling and Process Analysis of a Biomass Gasifier-Molten Carbonate Fuel Cell-Gas Turbine-Steam Turbine Cycle as a Green Hybrid Power Generator." H. A. Ozgoli, *Journal of Renewable Energy and Environment*, 3, 42-52.

2019 "Experimental Evaluation of an Energy Efficiency Improvement System in Split Air Conditioner." H. A. Ozgoli, K. Seiedi Niaki, *Amirkabir Journal of Mechanical Engineering*, 52, 51-60.

2019 "Propose and Analysis of an Integrated Biomass Gasification ‐ CHAT ‐ ST Cycle as an Efficient Green Power Plant." S. Hosseinpour, R. Mehdipour, A. Haji Seyed Mirzahosseini, A. H. Hemmasi, H. A. Ozgoli, *Environmental Progress & Sustainable Energy*, 38, 13184.

2018 "Gas Sweetening Process Simulation – Investigation on Recovering Waste Hydraulic Energy." M. Moghadasi, H. A. Ozgoli, F. Farhani, *International Journal of Aerospace and Mechanical Engineering*, 12, 798-804.

2018 "Thermo-economic analysis of absorption chiller integrated with a GE-F5 gas turbine for power enhancement (Zanbagh power plant, studied case)." S. M. Arabi, H. Ghadamian, M. Aminy, H. A. Ozgoli, B. Ahmadi, M. Khodsiani, I*ranian Journal of Mechanical Engineering Transactions of the ISME*, 19, 20-33.

2017 "Simulation of a Solid Oxide Fuel Cell with External Steam Methane Reforming and Bypass." H. A. Ozgoli, A. Allahyari, *Iranian Journal of Hydrogen and Fuel Cell*, 4, 103-118.

2017 "Integration of a Vanadium Redox Flow Battery with Proton Exchange Membrane Fuel Cell as an Energy Storage System." H. A. Ozgoli, H. Yazdani, *Iranian Journal of Hydrogen and Fuel Cell*, 4, 53-68.

2017 "Thermo-Economic Analysis of Applying Cooling System Using Fog on GE-F5 Gas Turbines (Case Study)." S. M. Arabi, H. Ghadamian, M. Aminy, H. A. Ozgoli, B. Ahmadi, *Journal of Heat and Mass Transfer Research*, 4, 73-81.

2017 "Simulation of Integrated Biomass Gasification, Gas Turbine and Air Bottoming Cycle as Energy Efficient System." H. A. Ozgoli, *International Journal of Renewable Energy Research*.

2017 "Economic Analysis of Biomass Gasification-Solid Oxide Fuel Cell-Gas Turbine Hybrid Cycle." H. A. Ozgoli, H. Ghadamian, M. Pazouki, *International Journal of Renewable Energy Research*.

2017 "Proposing a New Design Algorithm for Modeling & Comparative Evaluating of a Compound Regenerative Fuel Cell (RFC) System." H. Ghadamian, M. Baghban, F. Farhani, H. A. Ozgoli, *Journal of Renewable Energy and Environment*, 3, 44-53.

2017 "Exergy Analysis of a Molten Carbonate Fuel Cell-Turbo Expander-Steam Turbine Hybrid Cycle." H. A. Ozgoli, *Iranian Journal of Hydrogen and Fuel Cell*, 3, 267-279.

2016 "Modeling and Simulation of an Integrated Gasification SOFC-CHAT Cycle to Improve Power and Efficiency." H. A. Ozgoli, M. Moghadasi, F. Farhani, M. Sadigh, *Environmental Progress & Sustainable Energy*, 36, 610-618.

2016 "Energy Consumption Minimization of an Industrial Furnace by Optimization of Recuperative Heat Exchange." H. Ghadamian, F. Esmailie, H. A. Ozgoli, *Journal of Mechanics*, 32, 767-775.

2016 "Energy Price Analysis of a Biomass Gasification-Solid Oxide Fuel Cell-Gas Turbine Power Plant." H. A. Ozgoli, H. Ghadamian, *Iranian Journal of Hydrogen and Fuel Cell*, 2, 45-58.

2016 "A Transient model of Vanadium Redox flow Battery." H. A. Ozgoli, S. Elyasi, *Mechanics and Industry*, 17, 406 (1-12).

2015 "Hydrodynamic and Electrochemical Modeling of Vanadium Redox Flow Battery." H. A. Ozgoli, S. Elyasi, M. Mollazadeh, *Mechanics and Industry*, 16, 201 (1-13).

2015 "Optimal Design for Compact Heat Exchanger (CHE) by Heat transfer point of view as a furnace air Pre-heater." H. Ghadamian, H. A. Ozgoli, F. Esmailie, *Journal of Mechanic*, 31, 583-590.

2015 "A Double Pipe Heat Exchanger Design and Optimization for Cooling Purpose of an Alkaline Fuel Cell System." L. Ariyanfar, H. Ghadamian, M. Baghban, H. A. Ozgoli, *Iranian Journal of Hydrogen and Fuel Cell*, 4, 223-231.

2015 "Alternative Biomass Fuels Consideration Exergy & Power Analysis for Hybrid System Includes SOFC & GT Integration." H. A. Ozgoli, H. Ghadamian, R. Roshandel, M. Moghadasi, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 37, 1962-1970.

2013 "$CO_2$ Capture Technical Analysis for Gas Turbine Flue Gases with Complementary Cycle Assistance Including Non Linear Mathematical Modeling." M. Moghadasi, H. Ghadamian, H. Farzaneh, M. Moghadasi, H. A. Ozgoli, *Procedia Environmental Sciences*, 17, 648-657.

2013 "Energy Efficiency Improvement Considering Environmental Aspects Regards to a Biomass Gasification PSOFC/GT Power Generation System." H. A. Ozgoli, H. Ghadamian, H. Farzaneh, *Procedia Environmental Sciences*, 17, 831-841.

2012 "Thermo-economic analysis of absorption air cooling system for PSOFC/GT cycle." H. Ghadamian, A. A. Hamidi, H. Farzaneh, H. A. Ozgoli, *Journal of Renewable and Sustainable Energy*, 4, 043115.

2012 "Modeling SOFC & GT Integrated-Cycle Power System with Energy Consumption Minimizing Target to Improve Comprehensive cycle Performance (Applied in pulp and paper, case studied)." H. A. Ozgoli, H. Ghadamian, A. A. Hamidi, *The GSTF Journal of Engineering Technology*.

## (II) Conference Papers

2022 "Proposing a New Fast Model to Analyze Ingestion Phenomenon in an Industrial Gas Turbine." S. Hajikhani, H. A. Ozgoli, F. Farhani, 30th Annual International Conference of the Iranian Association of Mechanical Engineers (ISME), Tehran, Iran.

2018 "Thermodynamic Modeling of an IBG-CHAT-ST Power System." S. Hosseinpour, R. Mehdipour, A. Haji Seyed Mirzahosseini, A. H. Hemmasi, H. A. Ozgoli, *4th International Conference on Production Automation and Mechanical Engineering*, Montreal, Canada.

2018 "Gas Sweetening Process Simulation – Investigation on Recovering Waste Hydraulic Energy." M. Moghadasi, H. A. Ozgoli, F. Farhani, *4th International Conference on Production Automation and Mechanical Engineering*, Montreal, Canada.

2017 "Impact of Energy Price Consideration on Economic Analysis of a Solid Oxide Fuel Cell Hybrid Power Plant." H. A. Ozgoli, H. Yazdani, *The 6th Annual Conference of Chemistry, Chemical and Polymer Engineering*, Tehran, Iran.

2017 "Photoheterotrophic Enhanced Biocatalytic Hydrogen Production from Lignocellulosic Waste." *2nd International and 10th National Biotechnology Congress of Islamic Republic of Iran*, Tehran, Iran.

2016 "Modelling and evaluation of utilizing a vanadium redox flow battery with wind energy application." H. Qanadha, H. A. Ozgoli, S. S. Okhovat, *First international comprehensive competition conference of engineering sciences in Iran*, Anzali, Iran.

2012 "$CO_2$ Capture Technical Analysis for Gas Turbine Flue Gases with Complementary Cycle Assistance Including Non Linear Mathematical Modeling." M. Moghadasi, H. Ghadamian, H. Farzaneh, M. Moghadasi, H. A. Ozgoli, *The 3rd International Conference on Sustainable Future for Human Security (SUSTAIN) 2012*, Kyoto, Japan.

2012 "Energy Efficiency Improvement Considering Environmental Aspects Regards to a Biomass Gasification PSOFC/GT Power Generation System." H. A. Ozgoli, H. Ghadamian, H. Farzaneh, *The 3rd International Conference on Sustainable Future for Human Security (SUSTAIN) 2012*, Kyoto, Japan.

2011 "Modeling SOFC & GT Integrated-Cycle Power System with Energy Consumption Minimizing Target to Improve Comprehensive cycle Performance (Applied in pulp and paper, case studied)." H. A. Ozgoli, H. Ghadamian, A. A. Hamidi, *World Renewable Energy Congress 2011*, Linköping, Sweden.

## (III) Journal Papers (in Persian)

2015 "Transient Model and Technical Analysis of Vanadium redox Flow Battery with Polymer Membrane." H. A. Ozgoli, H. Yazdani, *Journal of Energy Engineering Management*, Available in: http://energy.kashanu.ac.ir/browse.php?a_code=A-10-747-1&slc_lang=fa&sid=1

2010 "A New Design Algorithm for Modeling and Comparative Evaluation of Compound Regenerative Fuel Cell (RFC) Systems." H. A. Ozgoli, H. Ghadamian, F. Atabi, *Journal of Environmental Science and Technology*, Available in: http://jest.srbiau.ac.ir/article_357_31.html

2006 "Regenerative Fuel Cells, Technical Considering and analysis." H. A. Ozgoli, H. Ghadamian, *Oil and Energy*, Available in: magiran.com/p344457

2006 "Methanol Fuel Cell Vehicles." H. A. Ozgoli, *Human and the Environment*, 2006, Available in: http://www.ensani.ir/fa/content/192162/default.aspx

2006 "Evaluation and Technical Analysis of Photovoltaic Systems for Designing Regenerative Fuel Cells." H. A. Ozgoli, H. Ghadamian, F. Atabi, *Journal of Environmental Science and Technology*.

## (IV) Conference Papers (in Persian)

2022 "Development of a Tool for Modeling the Phenomenon of Flow Ingestion in the Peripheral Seal of a Gas Turbine using Computational Fluid Dynamics." S. Hajikhani, H. A. Ozgoli, F. Farhani, S.M. Hosseinalipour, H. Khaledi, 7th National Gas Turbine Conference, Tehran, Iran.

2020 "Design and Implementation of a Small Scale Downdraft Biomass Gasifier to Generate Energy from Solid Wastes." H. A. Ozgoli, F. Farhani, K. Seiedi Niaki, *National conference on Advanced Sciences and Technologies in Water, Energy & Environment*, Tehran, Iran.

2019 "The Development of a Predictive Model for the Consumption of Steam Energy Carrier in the Gas Sweetening Process using Multivariate Regression with Real Data." M. Moghadasi, H. A. Ozgoli, F. Farhani *1st International Conference on the New Technologies in the Oil, Gas & Petrochemical Industries*, Tehran, Iran.

2018 "Experimental Analysis of a Mechanism for Improving Energy Performance of Air Conditioner Using Evaporative Condenser and Drain Water." M. Karami, H. A. Ozgoli, *3rd International Conference on Mechanical and Aerospace Engineering*, Tehran, Iran.

2018 "Energy Conservation of Oil Pump Stations using Operation Pressure Control Mechanism in Pipeline." M. Shahabi, H. A. Ozgoli, A. Akbarnia, *4th International Conference on Energy Management and Technology*, Tehran, Iran.

2018 "Modeling and Feasibility Study of Technical and Economical Wind and Photovoltaic Hybrid On-Grid System." K. Khatounabadi, H. A. Ozgoli, M. Ghadimi, *4th International Conference on Energy Management and Technology*, Tehran, Iran.

2017 "The Technical Study and Design of the Air Heat Exchangers using in the Combined Gas Turbine System with Air Bottoming Cycle." M. Shahrokhi, H. A. Ozgoli, *The 9th Conference of Heat Exchanger, Chiller and Cooling Tower*, Tehran, Iran.

2016 "Consideration the Effect of using Fog System on the Performance of Gas Turbine model Ruston TA-1750 in the Tehran branch of IOPTC." *First international comprehensive competition conference of engineering sciences in Iran*, Anzali, Iran.

2016 "Consideration and Comparative Comparison of Biomass Gasification Technologies Related to Situation of Iran." S. Khatami, H. A. Ozgoli, S. S. Okhovat, *First international comprehensive competition conference of engineering sciences in Iran*, Anzali, Iran.

2009 "Optimal design of Compact Heat Exchanger in heat transfer view point by MATLAB software." H. A. Ozgoli, *First International Heat Exchanger Conference*, Tehran, Iran.

**(V) Books (in Persian)**

2021 "Hydrodynamic Simulation of Fluids using ANSYS FLUENT Software", M. H. Mirabi, H.A. Ozgoli, E. Jabbari, T. Rajaei. *Iranian Research Organization for Science and Technology (IROST)*, Tehran, Iran.

2020 "Energy Management System Standards, Guildlines for Engineers", H. Ghadamian, M. Shakouri, M. Moghadasi, H. A. Ozgoli, *Material and Energy Research Center (MERC)*, Karaj. Iran.

2019 "Energy Management System Standard, ISO 50001:2018", M. Moghadasi, H. A. Ozgoli, *QM Academy*, Tehran, Iran.

## Citations Link

**Google Scholar:**

https://scholar.google.com/citations?hl=en&user=BFPU4ucAAAAJ

## RESEARCH PROJECTS

### (I) As Principal Investigator

2021 "Evaluate and analyze the effective parameters and provide a solution to modify the structure of air and flue gas lines in the turbochargers of TGM6 locomotives to improve energy performance and reduce emissions", Choghart Bafgh Mining and Development Cooperative Company, Bafgh, Iran.

2020 "Design and Development of a Predictive Model for Steam Consumption by Machine Learning Method for Gas Sweetening Process (Unit 101)", South Pars Gas Company, South Pars, Iran.

2020 "Development of a One-Dimensional Model to Predict Ingestion Phenomenon Based on Three-Dimensional Numerical Solution for the Path of Secondary Air Flow Network in an Industrial Gas Turbine", Turbotec Co., Tehran, Iran.

2018 "Technical and Economic Study of Tarasht Power Plant Boiler Exhaust and its Use in Kalina Cycle to Produce Electricity", Tarasht Power Plant Co., Tehran, Iran.

2018 "Techno-Economic Feasibility Study of Using Solar Energy for Power Generation at Khor & Biabanak Potash Complex", Iranian Mines & Mining Industries Development & Renovation (IMIDRO), Tehran, Iran.

2018 "Technical and Economic Feasibility Study of an off-grid Solar-Pumping System for Three Different Capacities at the Potash Khor & Biabanak Complex", Iranian Mines & Mining Industries Development & Renovation (IMIDRO), Tehran, Iran.

2017 "Design and Implementation of a Downdraft Biomass Gasifier in Accordance with the terms of Biomass Resources in Iran", Iranian Research Organization for Science and Technology (IROST), Tehran, Iran.

2017 "Modeling and Conceptual Designing of a Small-Scale Fluidized Bed Gasifier to Manage and Generate Energy from Wastes in Iran", Noandish Energy Engineering Company (NEECO), Tehran, Iran.

2017 "Preparing Five Request for Proposals (RFP) to Study on Biomass Gasification Technologies for Using in the Energy Market of Iran", Niroo Research Institute, Tehran, Iran.

2017 "Feasibility Study and Techno-Economic Analysis of Designing Solid Polymer Fuel Cell and Auto Thermal Reforming of Natural Gas Combined Heat and Power System (CHP)", Tadbir Behsazi Tateis, Tehran, Iran.

2016 "Implementation of a New Approach to Design and Modeling of Polymer Fuel Cell", Payame Noor University, Tehran, Iran.

2015 "Development of Energy Encyclopedia Application, First Phase: Research, Data Collection and Primary Product", AVAM Group Corporation, Tehran, Iran.

2015 "Investigation and Production of a Comprehensive Energy Management Application", AVAM Group Corporation, Tehran, Iran.

2014 "Simulation of a Vanadium Redox Flow Battery Compared with Polymeric Membrane Fuel Cell Types", Payame Noor University, Tehran, Iran.

2011 “Modeling SOFC & GT Integrated-Cycle Power System Using Auxiliary Systems with Energy Consumption Minimizing Target to Improve System Performance”, Iranian Fuel Conservation Company, Tehran, Iran.

## (II) As Co-Investigator

2019 “Investigation of the Set-up Procedures of the P104-unit Synchronous Motor to Reduce the Impact on the Power Grid and Decrease Start-up Amortization, Iran Central Iron Ore Company”, Bafgh, Iran.

2014 “Optimal Design with Energy Balance View Point in a Compact Heat Exchanger as a Heat Energy Recovery System (Case Study: The Industrial Preheater), Material and Energy Research Center”, Tehran, Iran, 2014, Completed.