

Iraj Mohammadfam

Professor

DoB : 1969/9/23 ■ Military Service : Served



✉ ir.mohammadfam@uswr.ac.ir

Tehran, Iran

📷 dr_irajmohammadfam

📞 (+98)9183122076

☎ (+98)2171732303

👤 About

Specialist in: 1- HSE Risk Assessment & Management, 2- Evaluation and Management of Human Error 3- Industrial Incident Investigation 4- Evaluate and Promote the HSE Culture.

💡 Skills

1. Risk Assessment And Management
2. Industrial Incident Investigation
3. Analysis and Management of Human Errors
4. Assess and Improve of HSE Culture

🎓 Education

- **Master:** Occupational Health and Safety
- **Bachelor:** Occupational Health and Safety
- **PhD:** HSE Management
- **MPH:** Crisis & Disaster Management

🏢 Work Experience

Professor (Hamadan Med. Sci. University) 2009 -2021

Professor (University of Social Welfare and Rehabilitation Sciences) 2021 -2022

HSE Consultant: Ports and Maritime Organization (Tehran, Iran)

HSE Consultant: MAPNA Group (Iran)

Senior Advisor to the Safety and Crisis Management: Islamic Council of Tehran (Iran)

HSE Consultant: Entkhab Group (Esfahan-Iran)

HSE Consultant: Mahansirjan Company (Sirjan-Iran)

🏆 Honors

1. **Top researcher of Hamadan University of Medical Sciences** January 2002
2. **Top researcher of Hamadan University of Medical Sciences** February 2008
3. **Top researcher of Hamedan province** September 2008
4. **Top researcher of Hamadan University of Medical Sciences** October 2009
5. **Top researcher of Hamadan University of Medical Sciences** October 2013
6. **Top researcher of Hamadan University of Medical Sciences** October 2014
7. **Top researcher of Hamedan province** September 2014
8. **Top professor of Hamadan University of Medical Sciences** February 1395
9. **Top researcher of Hamadan University of Medical Sciences** February 2016
10. **Medal of honor (Silver) in research** January 2016
11. **IRAN Top HSE researcher** May 2015
12. **Top researcher of Hamadan University of Medical Sciences** February 2017
13. **Medal of honor (Gold) in research** January 2019

Research (Books):

5. **Safety Engineering**)Hamadan Med. Sci. University – Fanavaran)
6. **Quantitative safety assessment**)Hamadan Med. Sci. University – Fanavaran)
7. **Personal protective equipments**)Hamadan Med. Sci. University – Fanavaran)
8. **Research Design and Statistics for the Safety and Health**)Hamadan Med. Sci. University – Fanavaran)
9. **Introduction to Electrical Safety and Health**)Fanavaran)
10. **Safety Analysis Techniques: Job Safety Analysis**)Fanavaran)
11. **Safety Analysis Techniques: Preliminary Hazard Analysis**)Fanavaran)
12. **Safety Analysis Techniques: Fault Tree Analysis**)Fanavaran)
13. **Safety Analysis Techniques: Hazop Study**)Fanavaran)
14. **Safety, Health and Working Conditions in the Transfer of Technology to the Developing Countries**)Fanavaran)
15. **Total Quality Management and Safety**)Fanavaran)
16. **Creative Solutions in Safety, Health and Environment**)Fanavaran)
17. **Safety and Health for Engineers**)Hamadan Med. Sci. University – Fanavaran)
18. **Guidelines for the Management of Change for Process Safety**)Hamadan Med. Sci. University)
19. **Effective HSE Training: Techniques, Games and Exercises**)Hamadan Med. Sci. University)
20. **Safety and Health in Workplace** (AHA)
21. **Industrial Accident Analysis** (HAK)
22. **Advanced safety Management (1): Principles of Safety Management** (HAK)
23. **Safety in Mines** (HAK)

Research (Summary of scientific output):



Iraj Mohammadfam

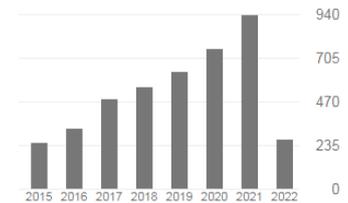
Professor; [University of Social Welfare and Rehabilitation Sciences](#)
Verified email at uswr.ac.ir

[emergency management](#) [Accident prevention](#) [Risk assessment and Mana](#)
[Safety culture](#) [Human Error](#)

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Citations	4902	3647
h-index	34	27
i10-index	125	101



Research (Articles- More Than 270):

Dynamic safety assessment of natural gas stations using Bayesian network 2017

Publisher : Journal of Hazardous Materials

Design and implementation of a fuzzy expert system for performance assessment of an integrated health, safety, environment (HSE) and ergonomics system: The case of a gas refinery 2008

Publisher : Information Sciences

Developing an integrated decision making approach to assess and promote the effectiveness of occupational health and safety management systems 2016

Publisher : Journal of Cleaner Production

A new method for quantitative assessment of resilience engineering by PCA and NT approach: A case study in a process industry 2013

Publisher : Reliability Engineering and System Safety

Safety risk modeling and major accidents analysis of hydrogen and natural gas releases: A comprehensive risk analysis framework 2015

Publisher : International Journal of Hydrogen Energy

Risk modelling of a hydrogen gasholder using Fuzzy Bayesian Network (FBN) 2020

Publisher : International Journal of Hydrogen Energy

Challenges in building resilience engineering (RE) and adaptive capacity: A field study in a chemical plant 2012

Publisher : Process Safety and Environmental Protection

Constructing a Bayesian network model for improving safety behavior of employees at workplaces 2017

Publisher : Applied Ergonomics 58, pp. 35-47

The evaluation of safety behaviors in a gas treatment company in Iran 2018

Publisher : Journal of Loss Prevention in the Process Industries 21(3), pp. 319-325

An adaptive neural network algorithm for assessment and improvement of job satisfaction with respect to HSE and ergonomics program: The case of a gas refinery 2011

Publisher : Journal of Loss Prevention in the Process Industries 24(4), pp. 361-370

Comparative analysis of creative and classic training methods in health, safety and environment (HSE) participation improvement 2012

Publisher : Journal of Loss Prevention in the Process Industries 25(2), pp. 250-253

Developing a process equipment failure knowledge base using ontology approach for process equipment related incident investigations 2013

Publisher : Journal of Loss Prevention in the Process Industries 26(6), pp. 1300-1307

Social vulnerability indicators in disasters: Findings from a systematic review 2017

Publisher : International Journal of Disaster Risk Reduction 22, pp. 219-227

Framework for continuous assessment and improvement of occupational health and safety issues in construction companies 2014

Publisher : Safety and Health at Work 5(3), pp. 125-130

Evaluation of the Quality of Occupational Health and Safety Management Systems Based on Key Performance Indicators in Certified Organizations 2017

Publisher : Safety and Health at Work 8(2), pp. 156-161

Surprising incentive: An instrument for promoting safety performance of construction employees 2015

Publisher : Safety and Health at Work 6(3), pp. 227-232

Evaluation of coordination of emergency response team through the social network analysis. Case study: Oil and gas refinery 2015

Publisher : Safety and Health at Work 6(1), pp. 30-34

Inherent health and environmental risk assessment of nanostructured metal oxide production processes 2018

Publisher : Environmental Monitoring and Assessment 190(2),73

Investigating interactions among vital variables affecting situation awareness based on Fuzzy DEMATEL method 2019

Publisher : International Journal of Industrial Ergonomics 74,102842

Available form:

https://scholar.google.com/citations?hl=en&user=5hxsbpIAAAAJ&view_op=list_works&sortby=pubdate

1. **Design of port safety scoring system using Safety Audit method** (Ports and Maritime Organization)
2. **Hazard identification and risk assessment in the operation of gazelle wagons** (Raja Passenger Trains Company)
3. **Investigating unsafe behaviors among steelmaking workers** (Mobarakeh Steel Company)
4. **Design of safety coefficient determination system** (Bakhtar Regional Electric Company)
5. **Evaluation of safety behaviors in Sarkhon and Qeshm refineries** (Sarkhon and Qeshm refineries)
6. **Analysis of risk assessment and management system and its updating based on OHSAS 18001: 2007** (MAPNA GROUP)
7. **Establishment of HSE-MS model based on OGP model** (MAPNA GROUP)
8. **Estimating and analyzing the costs of occupational accidents leading to death and disability** (MAPNA GROUP)
9. **Preparation and compilation of chemical safety database** (MAPNA GROUP)
10. **Hamedan bazaar safety assessment** (Hamedan Fire and Safety Services Organization)
11. **Evaluation of safety culture among the employees of Fajr Jam Gas Refining Company** (Fajr Jam Gas Refining Company)
12. **Preparation of a booklet of important industrial accidents of the 80's of the National Iranian Gas Company** (National Iranian Gas Company)
13. **Analysis of urban gas accidents in a period of 3 years (2008-2010) and providing appropriate control strategies** (National Iranian Gas Company)
14. **Design and compilation of 50 safety procedure of the National Iranian Gas Company** (National Iranian Gas Company)
15. **Investigation and correction of work postures in Mapna Boiler Engineering and Manufacturing Company** (Mapna Boiler Engineering and Manufacturing Company)
16. **Evaluate incident analysis methods and select three optimal techniques for incident analysis** (Kermanshah Petrochemical Industries Co.)
17. **Evaluation of accident analysis methods and selection of three optimal techniques for accident analysis of the Ports and Maritime Organization** (Ports and Maritime Organization)
18. **Measuring the incidence of unsafe behavior among employees of production halls in Saipa Company** (Saipa Company)
19. **Identify and determine HSE requirements in compliance with electrical equipment manufacturing** (Hormozgan Regional Electricity Company)
20. **Measuring and evaluating the level of safety culture in Tehran Railway Administration** (Islamic Republic of Iran Railways)
21. **Investigating the root causes of unsafe behaviors and safety violations by some contractors and workers** (Shiraz Electricity Distribution Company)
22. **Evaluating unsafe behaviors among Bandar Imam petrochemical employees and providing appropriate control strategies** (Bandar imam petrochemical company)
23. **Analysis of fatal accidents at Ferdowsi power plant in Mashhad using SMART technique** (MAPNA Group)
24. **Design and provide a comprehensive system for measuring safety system performance** (MAPNA Group)
25. **Controlling the rate of unsafe behaviors in the steel making area** (Mobarakeh Steel Company)
26. **Design a model to measure immune system performance** (Mobarakeh Steel Company)

27. **28. Provide a system for measuring the performance of the safety system** (Bakhtar Regional Electric Company)
 28. **Analysis and rooting of human accidents leading to death and disability and providing and implementing appropriate control strategies** (Shiraz Electricity Distribution Company)
 29. **Evaluation of safety culture among the staff of Shiraz Electricity Distribution Company** (Shiraz Electricity Distribution Company)
 30. **Assessment and management of HSE risks in Shiraz Electricity Distribution Company** (Shiraz Electricity Distribution Company)
 31. **Job stress studies of the employees of Mapna Turbine Engineering and Construction Company** (TUGA)
 32. **Investigation and modification of work postures in the production line of PARTU Company** (PARTU)
 33. **Design and implementation of risk assessment and management system** (Zolal Iran Company)
 34. **Fire and explosion risk assessment in gas pressure reducing stations (CGS) using FTA method and its modeling with PHAST software (Case study of Tehran)** (Iran National Science Foundation)
 35. **Risk assessment and management in the reliable supply of electricity to the holy shrine** (Khorasan Regional Electricity Company)
 36. **Identify, evaluate and prioritize emergency scenarios in a petrochemical company using Delphi and Fuzzy AHP-TOPSIS methods** (shazand (arak) petrochemical company)
 37. **Evaluating the Role of Implementing Lean Production Principles in Reducing Human Errors: A Case Study of Shazand (Arak) Petrochemical** (shazand (arak) petrochemical company)
 38. **Risk management in Bidboland Gas Refining Company** (Bidboland Gas Refining Company)
 39. **Designing a system for assessment and management of safety, health and environmental risks in the Ports and Maritime Organization** (Ports and Maritime Organization)
 40. **Evaluation of HSE culture in Tabriz Oil Refining Company** (Tabriz Oil Refining Company)
 41. **Investigation of ergonomic factors affecting the accident of work-related accidents at height** (Hamedan Regional Electricity Company)
1. **Risk Assessment and Management**
 2. **HAZOP Study**
 3. **Failure Mode and Effect Analysis**
 4. **Fault Tree Analysis**
 5. **Frank& Murgan Analysis**
 6. **Bow Tie Analysis**
 7. **Targeted Hazard Identification System (THIS)**
 8. **Hazard Identification (HAZID)**
 9. **Job Safety Analysis (JSA)**
 10. **Incident Investigation**
 11. **Root_Cause_Analysis**
 12. **Event and Causal Factor Charting (ECFC)**
 13. **Systematic Cause Analysis Technique (SCAT)**
 14. **TRIPOD-β**
 15. **Control Change Cause Analysis (3CA)**
 16. **Human Error Assessment and Management**
 17. **Human Factors Analysis and Classification System (HFACS)**
 18. **Task Analysis For Error Identification (TAFEI)**
 19. **Human Error Calculator (HEC)**
 20. **Cognitive reliability and error analysis method (CREAM)**
 21. **Tecnica Empirica Stima Errori Operatori (TESEO)**
 22. **Predictive Use Error Analysis (PUEA)**
 23. **human error assessment and reduction technique (HEART)**
 24. **Systematic Human Error Reduction and Prediction Approach**
 25. **Behavioural Based Safety**
 26. **Dot Mocracy**
 27. **Training to Trainer**
 28. **Safety Economy**
 29. **Accident Costs**
 30. **Health and Safety Training For Managers**
 31. **Control of Substances Hazardous to Health (COSHH) Training**
 32. **Fire Risk Assessment**
 33. **Dow Fire and Explosion Index (F&EI)**
 34. **Permit-to-Work**
 35. **Future Workshop**
 36. **...**