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

EDUCATION

Ph.D. **University of Maryland**, College Park, Reliability Engineering — May 2007
Dissertation: "Integrated Methodology for Uncertainty Analysis of Complex Computational Codes (USNRC Funded Research)"
Committee: Professor M. Modarres (co-chair), Prof. A. Mosleh (co-chair), P. G. Baecher, Prof. M. di Marzo, Prof. G. Pertmer

M.Sc. **University of Maryland**, College Park, Reliability Engineering — May 2005
Thesis: "Thermal Hydraulics Pressurized Thermal Shock Uncertainty Assessment; Application to Four Nuclear Power Plants in Support of NRC PTS Risk Re-Baseline (USNRC Funded Research)"
Co-Advisors: Professor M. Modarres, Prof. A. Mosleh

M.Sc. **Amirkabir University of Technology,** Tehran-Iran, Nuclear Engineering — Sept. 1997
Thesis: "Comparative Probabilistic Risk Assessment for Emergency Diesels Generators of Bushehr NPP Using Hybrid Fault Tree/Event Tree (FT/ET) and Markov Chain Method"
Co-Advisors: Professor F. Moattar, Professor. K. Sepanloo

B.Sc. **University of Tabriz**, Electrical Engineering — Sept. 1994
Minor in Communication

RESEARCH AREAS

Structural Prognostic and Health Management (PHM)	-Physics of Failure Based Fatigue, Corrosion, Wear, Creep -Deep Learning (DL) Data Analytics Methods for Reliability and RUL -Environmental Impacts -Augmented PoF/DL -Quantum Computing for Data Analytics and Semiconductor Testing
Resilience and Climate Adaptation	-Optimization and Performance -Resilience and Robustness Analysis -Prognostics and System Health Management -System Perturbances and Stress Testing -Numerical Techniques and Simulation models for Resilience-Big Data
Engineering Safety/Reliability/Security (SRS)	-Risk-based Regulatory and Design -Cyber-Physical-Human (CPH) Systems -Reliability Centered Maintenance, Modeling and Optimization -Mission Assurance in Critical Mission Systems Design and Operation

	-Science of Reliability; Thermodynamics Entropy Based Life and Reliability Assessment -Design for Reliability & Optimization for Emerging Technologies; Autonomous Vehicles, IoT -Electronics Reliability; Testing, Modeling and Simulation
Model Validation/ Uncertainty Quantification	-Uncertainty Modeling and Analysis -Inference with Uncertain Evidence, -Causal Modeling with Bayesian Belief Networks -Complex Codes Uncertainty Quantification

AWARDS AND RECOGNITIONS

- Associate Editor for ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems; Part A Civil Engineering Part B: Mechanical Engineering (Editor for Both Parts)
- ASME and ASQ Elected Fellow member.
- Keynote Speakers to Domestic and International Conferences
- Invited Speaker to United States Congress for the Congressional Briefing; Safety of Autonomous Vehicles (October 30, 2019)
- Best Reviewer Award: ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems Part B: Mechanical Systems-2022
- ASME IMECE2018 (Salt Lake City, UT, 2019) SERAD Innovation Challenge Award; 2nd Place (Adviser).
- ASME IMECE2018 (Pittsburg, PA, 2018) SERAD Innovation Challenge Award; First Place (Adviser).
- IRSEC2018 Conference (Shiraz-Iran) Best paper Award
- ASME IMECE2017 (Tampa, FL 2017) SERAD Innovation Challenge Award; First Place (Adviser).
- ASME IMECE2016 (Phoenix, AZ, 2016) SERAD Innovation Challenge Award; First Place (Adviser).
- Department of Mechanical Engineering, SUT Distinguished Research Awards, 2015.
- ASME IMECE2015 (Houston, TX 2015) SERAD Innovation Challenge Award; First Place.
- PSAM11/ESREL2011 (Conference (Helsinki, Finland 2012) Selected Paper for Journal of Reliability Engineering and System Safety Special Issue Publication (13 selections out of 760 papers)
- ASME IMECE2014 (Montreal, Canada 2014) Innovation Challenge Award; Second Place
- IREC2014 (Tehran-Iran) Conference Best Paper Award
- Sahand University of Technology Research Award, 2013
- First Place Award, Best Technical Paper, Paper Competition-DC Consul of Engineers and Architectural Societies (DCCEAS), 2007
- First Place Award; Best Technical Research, Graduate Paper Competition of ANS (American Nuclear Society), 2007
- Best Technical Research Paper Competition of Nuclear Engineering Division (NED) of the ASME, 2006
- IAA-DC Association Research Competition Award, Washington DC, 2004
- University of Maryland Scholarship Recipient, 2002

CAREER HISTORY

Associate Professor (adjunct) July 2020-Present
Mechanical Engineering Department
University of Maryland, College Park, MD
-Teaching per demand

-Co-Advising Graduate Students on their Research
-Research Projects and Proposals, and Organization of Workshops, and Seminars

Sr. Principal-Design Reliability Engineering
Teradyne Inc., North Reading, MA Dec. 2020-Present
-Design Qualification for Complex Test Equipment
-HALT/HASS Testing, Thermal Cycling, MTBF Estimations, Solder fatigue Simulations
Physics of Failure Analysis; PCBAs and Assembly
-Suppliers Reliability and Regulatory Qualification
-Development and Execution of Reliability Test Plan and Test Methods, and Reports

Senior Project Manager Dec. 2017- Jan. 2020
Johnson Controls Inc., York, PA
-Building Technology Design for Reliability
-Design for Reliability and Resilience
-Failure Analysis and Field Failure Data Assessment
-Reliability Laboratory Funding; Equipment, Procedures, and Training ($1.2 Million Project)
-Development of Reliability Target, Design Life and Parts Reliability Requirement

Associate/Assistant Professor, (promoted to Associate Professor in Sept. 2015) Mar. 2011-Sep. 2017
Sahand University of Technology/ Department of Mechanical Engineering
Area of Research:
- Science of Reliability; Thermodynamic-Based Entropy Measurement
- Engineering Risk Assessment (PRA)
- Multidisciplinary Reliability Analysis
- Optimization and Mathematical Programming
- Model Validation through Uncertainty/Sensitivity/Importance Analysis
- Nuclear Safety Assessment
- Manufacturing/Production Quality Assurance
- Energy Systems Modeling and Management

Offered Courses: Fundamental of Reliability Engineering, Engineering Risk Assessment, Sustainable Energy Analysis, Research Methods, Advanced Engineering Mathematics, Optimization, Nuclear Safety

Supervising of 4 Ph.D (3 Ongoing Ph.D Students) and 33 M.Sc. Students Graduated with the research resulted in more than 120 journal and conference papers. 7 funded projects. And Establishment of Reliability Analysis and Failure Analysis Simulation Lab in Mechanical Engineering Department.

Senior Research Engineer Dec. 2009 - Jul. 2011
FM Global Research –Risk/Reliability/failure Prevention Area
Led the projects in area of
- Fire Probabilistic Risk Assessment (PRA)
- Development of Approval Standards for Fire/Natural Hazards Grade Systems and Components
- Fire Protection Systems Natural Gas/Diesel Fire Pump Engine Reliability Assessment
- Design and Development of Reliability Database
- Condition-based Monitoring/ Prognostic Health Management for Gas Turbine Availability
- Process Control Cyber-Security Risk Assessment
- Fire Protection Systems Cost-Benefit Analysis
- Model Uncertainty for Complex System Analysis

Development of the structure for a new Standard, Reliability analysis for Wet and Mist Water Sprinkler Fire Protection System, Research on the Hazards of Hydrogen Dispenser Fueling Systems

Corporate Reliability Engineering Manager, Houston, TX Oct 2006-Dec 2009
Goodman Manufacturing Inc, Houston, TX
Led the department and supervised the Reliability Engineering and Failure Analysis Lab in activities, projects of:

- Laboratory program management
- Failure analysis (SEM/EDX, FTIR, Spectroscopy ...) for Materials Failure Investigation and Analysis
- Qualification Planning for Corrosion, Vibration, Noise and Extreme Environment Testing
- Electro-Mechanical -Parts design qualification and reliability testing
- New Design Reliability Validation
- Data (Test, Warranty) Analysis (Weibull and Bayesian) for Prediction of Reliability and Failure Rates, MTTF, MTBF; Modeling the reliability Growth in Designs improvement activities
- Root Cause Analysis of System/Components Failures and Corrective Actions. Failure Analysis for Field and Test Reported Issues.

- Leading design for reliability and risk assessment teams

Helped the Company to improve the residential heating and cooling market share from 17% to 26% and their product warranty from typical 5 years to 10 years; Development of World Class Reliability Engineering lab with $3 million Equipment and $250000 annual budget.

Industrial Training Instructor

- Practical Risk Assessment, RAMS 2023 Conference
- ASQ CRE, Certified Reliability Engineer, 2011, 2016, 2021, 2024
- Reli2011 Conference, Workshops in Reliability Testing and Design for Reliability, 2011
- Sanam Company, Accelerated Life Testing, Tehran, Iran, 2013-2014
- Iran Tractor Company, Workshop on Design for Reliability for Heavy Engines, 2015

RESEARCH VISITS

Visiting Faculty Jul 2016-Sep 2016
Center for Risk and Reliability, **University of Maryland (UMD)**, College Park
-Science of Reliability
-Health Monitoring by Thermodynamics Entropy Measurement and Analysis
-Multi-Unit PRA

Visiting Scholar Mar 2001-Sep 2001
International Studies Center, **Massachusetts Institute of Technology (MIT)**, Cambridge, MA

- Technical Implementation of Nuclear Safeguard
- Technical Issues in implementation and monitoring safeguard system; Material accountability in developing countries and affectivity of existing technologies; the lessons learnt in implementation of Chemical Weapons Ban Treaty (CWBT) by comparative study of the complications.

Visiting Scholar Sep 1999-Mar 2000
Faculty of Electrical and Computing, University of Zagreb, Zagreb-Croatia

- Relap5 System Code Analysis; Structure, Modeling Options, and Applications (Advisors Prof. Nenad Debrecin and Dr. Thomas Bajs)
- Thermal Hydraulics System Code Analysis for SPES Test Facility; study of primary loop coolant volume in different heights. Development of full input steady state and transient; LBLOCA study and

validation of the results with benchmark data. Comparison of results of RELAP5/MOD3.2 with RELAP5/MOD2

TRAININGS/WORKSHOPS

-NSF Grant and Proposal Writing, Montreal, CA
National Science Foundation November 2014
-Advanced Teaching Methods, Tabriz, Iran
-Sahand University of Technology August 2011
-RELAP5/MOD3 Code Source Structure; Supervisor: Richard Wagner, Senior Developer of RELAP5 Code in Idaho National Lab (INEL)
Innovative Systems Software (ISS INC), Idaho Falls, ID, May 2006
TRACE (TRAC/RELAP Advanced Computational Engine) TH System Code, Structure and Applications
Information Systems Laboratories, Rockville, Maryland, June-July 2006
-Training on QA of Nuclear Power Plants Full Life Cycle (180 Hours).
-International Atomic Energy Agency, Bushehr, Iran, January-February 1997

PUBLICATIONS

Refereed Journal

1. Comprehensive assumption-free dynamic simulation of an organic Rankine cycle using moving-boundary method, Mojtaba Raheli, Rahim Khashbakhti-Saray, Mohammad Pourgol-Mohammad, Journal of Energy, Submitted 2023.
2. Multi-Criteria Sensor Placement Determination in Prognostics Health Management Using Combined Fault Diagnosis, Fault Detection, and Risk Indexes, Mohammad Pourgol-Mohammad, Farzin Salehpour-Oskouei, **Proceedings of iMeche, Part O, Journal of Risk and Reliability,** Volume 237, Issue 6, 2023, pp. 1234-1247.
3. Mandibular reconstruction system reliability analysis using probabilistic finite element method, F. Ghalichi, S. Kargarnezhad, M. Pourgol-Mohammad, A. Garajei, Computer Methods in Biomechanics and Biomedical Engineering, 2021 Oct;24(13):1437-1449.
4. Low-Cycle Fatigue Assessment of Metallic Materials Based on Thermodynamic Entropy Generation - Methodology and Model Development, H. Salimi, M. Pourgol-Mohammad, M. Yazdani, **International Journal of Fatigue**, Volume 144-106058, 2021.
5. Mandible reconstruction using fibula free flap by new method using CAD/CAM and 3D printing technique, F. Ghalichi, S. Kargarnejad, M. Pourgol-Mohammad, A. Garajei, ACTA **Otorhinolaryngologica Italica**, 2020 (Accepted)
6. Evaluation of failure of a titanium conventional plate in mandibular reconstruction and improve the performance with fibula free flap, F. Ghalichi, S. Kargarnezhad, M. Pourgol-Mohammad, A. Garajei, J **Craniomax** Res 2020; 7(2) : 70-78.
7. Biomechanical evaluation of reconstructed extensive mandibular defects by different models using finite element method, F. Ghalichi, S. Kargarnejad, M. Pourgol-Mohammad, A. Garajei, **Journal of Mechanics in Medicine and Biology**, Vol. 20, No. 08, 2050053 (2020).
8. Probabilistic Life Assessment of Gas Turbine Blade Alloys under Creep, B. Soltanmohammadlou, M. Pourgol-Mohamad, M. Yazdani, **International Journal of Reliability, Risk and Safety: Theory and Application**, 2020 2020 Vol. 3/ Issue 2/ 2020 pp. 9-17.
9. Mandibular reconstruction system reliability analysis using probabilistic finite element method, S. Kargarnezhad, F. Ghalichi, S. Kargarnezhad, M. Pourgol-Mohammad, **Computer Methods in Biomechanics and Biomedical Engineering**, 2020 (Submitted).
10. Development of an Efficient Approach for Reliability Analysis Using Comparative Study of Several Static and Dynamic Methods; Case Study of an Unmanned Aerial Vehicle, A. Khayati, M. Pourgol-Mohammad, S. Shiri, **International Journal of Reliability, Risk and Safety: Theory and Application** 10.30699/IJRSS.2020.231766.1036 Vol. 3/ Issue 1/ 2020 pp. 45-53.

11. A methodology for truck allocation problem considering dynamic circumstances in open pit mines, A. Moniri-Morad, M. Pourgol-Mohammad, H. Agha-Babaei, J. Sattarvand, **Mining-Geology-Petroleum Engineering Bulletin,** 2019 Vol. 34 No. 4 (2019): No. 47.

12. Physics of Failure Based Reliability Assessment for Systems Exposed to Sliding Wear under Uncertainty, M. Pourmostafaei, M. Pourgol-Mohamad, M. Yazdani, H. Salimi, **ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems: Part B: Mechanical Systems,** June 2020; 6(2): 021010.

13. Predictions of Temperature Evolution and Thermodynamic Entropy during Fatigue Failure for Metal Specimens, H. Salimi, M. Pourgol-Mohammad, M. Yazdani, **International Journal of Fatigue**, 127(**2019**) 403-416.

14. Simulation of Hazards Associated with Fuel Storage Tanks in Petroleum, M. Pourgol-Mohammad, M. Pourghafari, R. Alizadeh, M. Raheli Kaleibar, M. Soleimani, **ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems: Part B: Mechanical Systems,** doi: 10.1115/1.4042368, **2019**; 5(2):021003-021003-12.

15. Reliability-based covariate analysis for complex systems in heterogeneous environment; Case Study of Mining Equipment, A. Moniri-Morad, M. Pourgol-Mohammad, H. Agha-Babaei, J. Sattarvand, **Proceedings of iMeche, Part O, Journal of Risk and Reliability, 2019**, Vol. 233(4) 593–604.

16. Capacity-based Performance Measurements for Equipment Fleet in Open Pit Mines, A. Moniri-Morad, M. Pourgol-Mohammad, H. Agha-Babaei, J. Sattarvand, **Springer Journal of Central South University, (2019)** 26: 1672−1686.

17. Hybrid Probabilistic Physics of Failure Evaluation of Reliability in RF-MEMS Switches, M. Pourgol-Mohammad, M. Mobasher Moghaddam, M. Soleimani and R. Aaghazadeh-chakherlou, International Journal of Reliability, Risk and Safety: Theory and Application, Vol. 1, No. 1, **2018**.

18. Editorial Note; Special Section on Nuclear Multiscale Systems Analysis for Safety and Security, M. Pourgol-Mohammad, L. Cizeli, **ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems: Part B: Mechanical Systems, 2017,** 4(3):030301-030301-1.

19. Risk-Based Optimization of Sensor Placement in System Health Monitoring Process, F. Salehpour, M. Pourgol-Mohammad, **Proceedings of iMeche, Part O, Journal of Risk and Reliability**, vol. 232, 1: pp. 65-81, **2017**.

20. Reliability Evaluation for Biomedical Systems: Case Study of a Biological Cell Freezing, A. Amirpourabasi, M. Pourgol-Mohammad H. Niroomand-Oscuii, **Current Trends in Biomedical Engineering & Bioscience** 6(3): CTBEB.MS.ID.555688 (**2017**).

21. Preface: Special Issue of IREC2016 Conference Selected M. Pourgol-Mohammad, A. Ahmadi, and International Journal of. System Assurance Engineering and Management, Volume 8, Issue 3, pp 529–531 (**2017**).

22. Stochastic Fatigue Crack Growth Analysis for Space System Reliability, H. Salimi, S. Kiad, M. Pourgol-Mohamad, **ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems: Part B: Mechanical Systems,** 4(2):021004-021004-7, **2017**.

23. Design for Reliability of Automotive's Complex Sub-systems; Case Study of Dry Friction Clutch System, M. Pourgol-Mohammad, A. Hejazi, M. Soleimani, A. Ahmadi, D. Jalalivahid, **International Journal of. System Assurance Engineering and Management**, (**2017**) Volume 8, Issue 3, pp 572–583.

24. Stochastic lifetime estimation of pressurized gas pipeline; Case study of the urban gas pipeline, B. Modiri, M. Pourgol-Mohammad, M. Yazdani, H. Salimi, F. Salehpour-Oskouei, and A. Ahmadi, **International journal of COMADEM**, Vol 20 No 2 (April **2017**) 31-37.

25. Reliability Enhancement of Centrifugal Pumps by Multi-Objective Genetic Algorithm Optimization, M. Pourgol-Mohammad, P. Makarachi, M. Soleimani and A. Ahmadi, **International journal of COMADEM**, Vol 20 No 2 (April **2017**) 23-30.

26. Sensitivity Analysis for Corsor Models Simulating Fission Product Release in LOFT-LP-FP-2 Severe Accident Experiment, S.M. Hoseyni, M. Pourgol-Mohammad, **Journal of KERNTECHNIK**, 82(**2017**)1.

27. Estimating the Change Points of Bathtub-Shaped Hazard Functions, R. Aghazadeh, M. Pourgol-Mohammad, K. Sepanloo, **International Journal of. System Assurance Engineering and Management**, Volume 8, Issue 3, pp 553–559 (**2017**).

28. Risk Assessment of Sensor Failures in a Condition Monitoring Process; Degradation-Based Failure Probability Determination, F. Salehpour, M. Pourgol-Mohammad, **International Journal of System Assurance Engineering and Management**, Volume 8, Issue 3, pp 584–593 (**2017**).

29. Brain Tumor Growth Simulation: Model Validation through Uncertainty Quantification, N. Meghdadi, H. Niroomand-Oscuii1, M. Soltani, F. Ghalichi, M. Pourgol-Mohammad, **International Journal of System Assurance Engineering and Management**, Volume 8, Issue 3, pp 655–662 (**2017**).

30. Assessment of the Pitting Corrosion Degradation Lifetime; Case Study of Boiler Tubes, L. Naseh, M. Pourgol-Mohammad, **ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems: Part B: Mechanical Systems, 2017**; 3(4):041002-041002-7.

31. Model uncertainty in severe accident calculations: a structural methodology with application on LOFT LP-FP-2 experiment, **Nuclear Technology**, Volume 193, pp. 341-363, March **2016**.

32. Importance Analysis for Uncertain Parameters in Complex Codes; A Practical Approach in Thermal-hydraulics Applications, M. Pourgol-Mohammad, S.M. Hoseyni, M. Hoseyni, K. Sepanloo, **Nuclear Engineering and Design**, 305 (**2016**) 400–410.

33. Fault Diagnosis Improvement Using Dynamic Fault Model in Optimal Sensor Placement; A Case Study of Steam Turbine, F. Salehpour, M. Pourgol-Mohammad, **Journal of Quality and Reliability Engineering International**, (wileyonlinelibrary.com) DOI: 10.1002/qre.2031, **2016**.

34. Preface-Special Issue of PSAM12 Conference Selected papers (Editorial Letter), C. Smith, M. Pourgol-Mohammad, Journal of **Reliability Engineering and System Safety**, 145(**2016**)243-244.

35. Stochastic Fatigue Crack Growth Analysis of Metallic Structures under Multiple Thermal - Mechanical Stress Levels, M. Yazdanipour, M. Pourgol-Mohammad, Journal of **Material and Design**, 95 (**2016**)599–611.

36. A Fatigue Damage Accumulation Model Based on Stiffness Degradation of Composite Materials, S. Shiri, M. Pourgol-Mohammad, M. Yazdani, Journal of **Material and Design**, 88(**2015**)1290-1295.

37. A Bayesian Ensemble of Sensitivity Measures for Severe Accident Modeling, S.M. Hoseyni, F. Di Maio, M. Vagnoli, E. Zio, M. Pourgol-Mohammad, **Nuclear Engineering and Design**, 295 (**2015**)182–191.

38. Prediction of Remaining Fatigue Cycles in Composite Materials under Uncertainty, S. Shiri, M. Pourgol-Mohammad, M. Yazdani, **ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems: Part B: Mechanical Systems**, doi:10.1115/1.4031037 **2015**;2(1):011001-011001-6..

39. Fatigue Life Prediction Based on Probabilistic Fracture Mechanics; Case Study of Automotive Parts, M. Yazdanipour, M. Pourgol-Mohammad, N. Choupani, M. Yazdani, **ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems: Part B: Mechanical Systems**, doi:10.1115/1.4030946, **2015**; 2(1):011002-011002-6..

40. Reliability based Design and Analysis of a Twin-Shaft Turbofan Engine, M. Mohammadpour, J. Pirkandi, M. Pourgol-Mohammad, M. Jahromi, **Aerospace Mechanics Journal**, Volume 3, No. 3, **2014**, pp 21-33 (In Farsi).

41. Design for Reliability of Complex System; Case Study of a Horizontal Drilling Equipment with Limited Failure Data, M. Soleimani, M. Pourgol-Mohammad, A. Rostami, A. Ghanbari, **Journal of Quality and Reliability Engineering**, Volume **2014**/524742.

42. Effect of strength dispersion on fatigue life prediction of composites under two-stage loading, S. Shiri, M. Pourgol-Mohammad, M. Yazdani, Journal of **Material and Design**, Volume 65, pp 1189–1195 2015.

43. Assessment of human error importance in PWR PSA, K. Karimi, F. Yousefpour, A, Abbaspour, M. Pourgol-Mohammad, **Romanian Journal of Physics**., Vol. 59, Nos. 7–8, P. 873–883, 2014.

44. Application of Reliability-Centered Maintenance for Productivity Improvement of Open Pit Mining Equipment; Case Study of Sungun Copper Mine, A. Moniri-Morad, M. Pourgol-Mohammad, J. Sattarvand **Journal of Central South University; Science & Technology of Mining and Metallurgy**, (**2014**) 21: 2372−2382.

45. Severe Accident Importance Uncertainty Analysis: Qualitative and Quantitative Method, S.M. Hoseini, M. Pourgol-Mohamad, **Reliability Engineering and System Safety**, 125 (**2014**) 22–35.

46. Methodology for the use of experimental data to enhance model output uncertainty assessment in thermal hydraulics codes. M. Pourgol-Mohamad, A. Mosleh, M. Modarres, **Reliability Engineering and System Safety** 95 (**2010**)77-86

47. Thermal–hydraulics system codes uncertainty assessment: A review of the methodologies. M. Pourgol-Mohammad, **Annals of Nuclear Energy** 36 (**2009**)1774-1786.

48. Analysis of Efficiency and Effectiveness of Technical-Engineering Groups in Iranian Universities of Technology, R. Mahdi, M. Pourgol-Mohamad, Journal of Applied Science, **2010**, 11(3): 473-483.

49. Integrated TH Uncertainty Analysis Application to LOFT LBLOCA, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, **Nuclear Technology**, Volume 165 · Number 3 · March **2009** · Pages 333-359.

50. Structured Treatment of Model Uncertainty in Complex Thermal-Hydraulics Codes, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, **Nuclear Engineering and Design**, 241(**2011**)285–295.

51. Comments on "Effect of Uncertainties in Best-Estimate Thermal Hydraulic Analysis on Core Damage Frequency for PSA" Yun-Je Choa, Tae-Jin Kima, Ho-Gon Limb, Goon-Cherl Parka, M. Pourgol-Mohamad, **Nuclear Engineering and Design**, **2011**.

CONFERENCES PROCEEDINGS (PEER-REVIEWED)

1. Design and Energy Flow Management of Hybrid Renewable Energy System, R. Amini, A. Davani, M. Pourgol Mohamad, ASME IMECE2021 Conference, Virtual Conference, 2021.

2. Safety Technology Advancements for Autonomous Cars; Prospective Of Manufacturing, Regulatory And Society, M. Pourgol Mohamad, A. Pourgol Mohamad, ASME IMECE2021 Conference, Virtual Conference, 2021.

3. Heat Transfer Rate Estimation in Recoverable Heat Exchanger from Waste Energy in Internal Combustion Engines, M. Raheli, R. Khoshbakhti., M. Pourgol-Mohamad, 3rd National Conference of Combustion Engines (3NCICE-Virtual), 2019.

4. Evaluation of Titanium Conventional Miniplate and 3-D Miniplate in Fixation of Mandibular Fracture: Experimental and Finite Element Analysis, F. Ghalichi, S. Kargarnejad, M. Pourgol-Mohammad, A. Garajei, 2020 27th national and 5th International Iranian Conference on Biomedical Engineering (ICBME) (Submitted).

5. Design and Fabrication of Mandibular Customized Implants by CAD/CAM Method and 3-D Printing, S. Kargarnejad, F. Ghalichi, M. Pourgol-Mohammad, A. Garajei, 2020 27th national and 5th International Iranian Conference on Biomedical Engineering (ICBME) (Submitted).

6. Pre-Feasibility Study and Unit Sizing of Hybrid Renewable Energy System for a Global System for Mobile Communications (GSM) Station in Tabriz, Iran, R. Amini, M. Pourgol Mohamad, ASME IMECE2020 Conference, Virtual Conference, 2020.

7. A Comparison of Probabilistic-Monte Carlo and Fuzzy-Monte Carlo Simulation Approaches for Dynamic Fault Tree: Case of Renewable Power Systems, J. Asghari, M. Pourgol-Mohammad, ASME IMECE2020 Conference, Virtual Conference, 2020.

8. Developing an Efficient Approach for Unmanned Aerial Vehicle Reliability Analysis, A. Khayati, M. Pourgol-Mohammad, ASME IMECE2020 Conference, Virtual Conference, 2020.

9. Six-sigma technique utilization challenges in services with human-based data, M. Pourgol-Mohammad, **ASME Congress 2019** Conference, Salt Lake City, 2019.
10. Introducing a New Approach: Probabilistic Energy Management (PEM), A. Moharrami, M.E. Sarbandi Farahani, M. Pourgol-Mohammad, **IRSEC2018 Conference**, Shiraz-Iran, May 2018.
11. A Review of Thermodynamic Entropy-Based Damage Determination, M. Pourgol-Mohammad, H. Salimi, A. Moharrami, **IRSEC2018 Conference**, Shiraz-Iran, May 2018.
12. Reliability-based regression model for complex systems considering environmental uncertainties, A. Moniri-Morad, M. Pourgol-Mohammad, H. Aghababaei, J. Sattarvand, **PSAM14 Conference**, Los Angeles, CA, Sep. 2018.
13. A Comprehensive Sensor Placement Determination in Condition Monitoring Process Using Combined Fault Detection, Fault Diagnosis and Risk Indexes, F. Salehpour, M. Pourgol-Mohammad, **PSAM14 Conference**, Los Angeles, CA, Sep. 2018.
14. Thermodynamic entropy generation model for metal fatigue failure, H. Salimi, M. Pourgol-Mohammad, M. Yazdani, **PSAM14 Conference**, Los Angeles, CA, Sep. 2018.
15. Reliability and Life Estimation of Systems under Wear Failure Mechanism, M. Pourtmostafaei, M. Pourgol-Mohammad, M. Yazdani, **ASME Congress 2018** Conference, Pittsburg, PA 2018.
16. Uncertainty Quantification of Edwards High-Pressure Pipe Behavior Using Complex System Thermal-Hydraulics Codes, M. Raheli Kaleibar, M. Pourgol-Mohammad, R. Khoshbakhti Saray, S.M Hoseyni, **ASME Congress 2018** Conference, Pittsburg, PA 2018.
17. Life Assessment of Gas Turbine Blades Under Creep Failure Mechanism Considering Humidity, B. Soltanmohammadlou, M. Pourgol-Mohammad, M. Yazdani, **ASME Congress 2018** Conference, Pittsburg, PA 2018.
18. Life assessment based on numerical thermodynamic entropy estimation; case study of metal fatigue, M. Yousefi-Faal, H. Salimi, M. Pourgol-Mohammad, **ASME Congress 2017** Conference, Tampa, FL 2017.
19. Hybrid Probabilistic Physics of Failure Evaluation of Reliability in Mems Devices, M. Pourgol-Mohammad, M. Mobasher, M. Soleimani, **ASME Congress 2017** Conference, Tampa, FL 2017.
20. Deterministic Hazard Assessment for Petroleum Refinery Products Storage Tanks; Case Study of Tabriz Refinery, M. Pourghafari, M. Pourgol-Mohammad, R. Alizadeh, M. Raheli-Kaleibar, M. Soleimani, **ASME Congress 2017** Conference, Tampa, FL 2017.
21. Risk Assessment of Energy Systems Exposed to Climate Change Induced Stresses; A Systematic Framework, M. Modarres, M. Pourgol-Mohammad, **ASME Congress 2017** Conference, Tampa, FL 2017.
22. Dynamics Reliability Evaluation of Space Systems: Case Study of Satellite Attitude Control, M. Pourgol-Mohammad, A. Farhadi, F. Salehpour-Oskuei, **ASME Congress 2016** Conference, Phoenix, AZ 2016.
23. Probabilistic Reliability Evaluation of Space System Considering Physics of Failure: Case Study of Fatigue Analysis, S. Kiad, M. Pourgol-Mohammad, H. Salimi, **ASME Congress 2016** Conference, Phoenix, AZ 2016.
24. Deterministic Hazard Evaluation for Natural Gas Pipes Failure, M. Pourgol-Mohammad, A. Mehrzad, M. Soleimani, **ASME Congress 2016** Conference, Phoenix, AZ 2016.
25. A Systematic Approach for Severe Accident Uncertainty Analysis, M. Hoseyni, M. Pourgol-Mohammad, Proceedings of **ASME ICONE24** Conference, Charlotte, NC, 2016.
26. Overview of Code Structures, Challenges & Available Methodologies for Treatment of Model Uncertainty in Severe Accident Calculations, M. Hoseyni, M. Pourgol-Mohammad, Proceedings of **ASME ICONE24 Conference**, Charlotte, NC, 2016.
27. Change Point Estimation in The Bath-Tub Curve Hazard Function, R. Aghazadeh, M. Pourgol-Mohammad, **Proceedings of International Reliability Engineering Conference (IREC2016)**, Tabriz, Iran, 2016.

28. Sensor Placement Optimization in Support of Condition Monitoring Process Based on The Risk Metrics, F. Salehpour, M. Pourgol-Mohammad, **Proceedings of International Reliability Engineering Conference (IREC2016)**, Tabriz, Iran, 2016.
29. Probabilistic Risk Assessment for Mining Haulage Operation Equipments in Open Mines; Case of Sungun Copper Mine, A. Moniri-Morad, M. Pourgol-Mohammad, **Proceedings of International Reliability Engineering Conference (IREC2016)**, Tabriz, Iran, 2016.
30. Brain Tumor Growth Simulation: Model Validation through Uncertainty Quantification, N. Meghdadi, H. Niroomand, F. Ghalichi, M. Pourgol-Mohammad, **Proceedings of International Reliability Engineering Conference (IREC2016)**, Tabriz, Iran, 2016.
31. Degradation Evaluation on Sensor Network Optimization in Fault Diagnosis Process, F. Salehpour, M. Pourgol-Mohammad, **ASME Congress 2015 Conference**, Houston, TX 2015.
32. Assessment of the Pitting Corrosion Degradation Lifetime; Case Study of Boiler Tubes, L. Naseh, M. Pourgol-Mohammad, **ASME Congress 2015 Conference**, Houston, TX 2015.
33. Improving Dynamic Fault Tree Method for Complex System Reliability Analysis: Case Study of a Wind Turbine, J. Asghari, M. Pourgol-Mohammad, F. Salehpour, **ASME Congress 2015 Conference**, Houston, TX 2015.
34. Optimal sensor placement for efficient fault diagnosis in condition monitoring process; a case study on steam turbine monitoring, F. Salehpour, M. Pourgol-Mohammad, **Proceedings of ICRESH-RAMS Conference**, Lula, Sweden, 2015.
35. Optimizing Maintenance Crediting Maintenance Rule: A Case Study on Safety Injection System, K. Karimi, F. Yousefpour, A. Abbaspour Tehranifard, M. Pourgol-Mohammad, G. Jahanfarniaa, Proceedings of **Nuclear 2014 Conference**, Romania 2014.
36. Reliability Evaluation for Biomechanics Transient Stresses: Case Study of Biological Cell Vitality in Freezing Process, A. Amirpour-Abasi, M. Pourgol-Mohammad, H. Niroomand, **ASME Congress 2014** Conference, Montreal, Canada 2014.
37. Adaptive Fuzzy Computed Torque Controller for Under Actuated Bipedal Robot, H. Ansari, M. Pourgol-Mohammad, A. Ghanbari, **ASME Congress 2014** Conference, Montreal, Canada 2014.
38. A Review On Experimental and Numerical Investigations On Using Nanofluid in Volumetric Solar Energy Collectors (Direct Solar Receivers), S. Mirmasoumi, M. Pourgol-Mohammad, **ASME Congress 2014** Conference, Montreal, Canada 2014.
39. Piping Anti–Corrosion Coating Life Assessment, B. Modiri, M. Pourgol-Mohammad, **ASME Congress 2014** Conference, Montreal, Canada 2014.
40. Probabilistic Assessment of Fatigue Life in Fiber Reinforced Composites, S. Shiri, M. Pourgol-Mohammad, **ASME Congress 2014** Conference, Montreal, Canada 2014.
41. Centrifugal Pump Mechanical Seal and Bearing Reliability Optimization, M. Makarachi, M. Pourgol-Mohammad, Proceedings of **PSAM12** Conference, Honolulu, Hi 2014.
42. Modified-LOPA; a Pre-processing Approach for Nuclear Power Plants, S.M. Gheyasi, M. Pourgol-Mohammad, Proceedings of **PSAM12** Conference, Honolulu, Hi 2014.
43. Probabilistic Assessment of Composite Plate Failure Behavior under Specific Mechanical Stresses, S. Oftadeh, M. Pourgol-Mohammad, M. Yazdani, Proceedings of **PSAM12** Conference, Honolulu, Hi 2014.
44. Design for Reliability of Complex System with Limited Failure Data; Case Study of a Horizontal Drilling Equipment, M. Soleimani, M. Pourgol-Mohammad, Proceedings of **PSAM12** Conference, Honolulu, Hi 2014.
45. Importance Analysis for Uncertain Thermal-hydraulics Parameters, M. Pourgol-Mohammad, S.M. Hoseyni, Proceedings of **PSAM12** Conference, Honolulu, Hi 2014.
46. Modified-Layer of Protection Analysis; Application on Gas Condensate Stabilization Facility, S.M. Gheyasi, M. Pourgol-Mohammad, R. Zarghami, R. Alizadeh, **5th National HSE Symposium**, Tehran-Iran, 2014.

47. Modified Layer Of Protection Analysis For Nuclear Safety Assessment, S.M. Gheyasi, Proceedings of **ASME ICONE22** Conference, Prague, Czech Republic, 2014.
48. Dynamic Availability Modeling of a Typical Emergency Diesel Generator using Dynamic Reliability Block Diagram, S. Rastayesh, M. Pourgol-Mohammad3rd International Conference on Reliability Engineering (**IREC2014**), February 2014, Tehran-Iran.
49. Model Uncertainty Assessment; Review of Available Approaches, S.S. Hoseyni, M. Pourgol-Mohammad, Proceedings of 3rd International Conference, K. Sepanloo, Proceedings of 3rd International Reliability Engineering Conference (**IREC2014**), February 2014, Tehran-Iran. **(1st Place Best Paper Award)**
50. Reliability Centered Equipment Management for Sungun Copper Mine Hauling Dump Trucks, A. Moniri Morad, M. Pourgol-Mohammad, J. Sattarvand, Proceedings of 3rd International Conference on Reliability Engineering (**IREC2014**), February 2014, Tehran-Iran.
51. Determination of Success Criteria in Transient Thermal Stresses: A Biomechanical Case Study of Cell Cryopreservation, A. Amirpourabasi, H. Niroomand, M. Pourgol-Mohammad, Proceedings of 3rd International Conference on Reliability Engineering (**IREC2014**), February 2014, Tehran-Iran.
52. Risk Assessment for the Lubrication Filter of Turbo-Jet by Modified FMEA, M. Mohammadpour, M. Pourgol-Mohammad, J. Pirkandi, Proceedings of 3rd International Conference on Reliability Engineering (**IREC2014**), February 2014, Tehran-Iran.
53. Early Design Phase Reliability Evaluation for Drilling Equipment, M. Soleimani, M. Pourgol-Mohammad, A. Rostami, Proceedings of 3rd International Conference on Reliability Engineering (**IREC2014**), February 2014, Tehran-Iran.
54. Probabilistic Fatigue Crack Growth Analysis for Life Prediction Of Automotive Components, M. Yazdanipour, M. Pourgol-Mohammad, N. Choupani, M. Yazdani, **ASME IMECE2013**, San Diego, CA, 2013.
55. Uncertainty Analysis Plus Importance in Severe Accident Calculations; Quantitative Evaluation Of Important Parameters, S.M. Hosseini, M. Pourgol-Mohammad, **ASME IMECE2013**, San Diego, CA, 2013.
56. Reliability Centered-Maintenance for Off-Highway Truck: Case Study of Sungun Copper Mine Operation Equipment, A. Moniri, M. Pourgol-Mohammad, J. Sattarivand, **ASME IMECE2013**, San Diego, CA, 2013.
57. Layout Optimization of a Multiple Pinned Joint Under Bending In A Limited Contact Area, M. Hejazi, M. Pourgol-Mohammad, **ASME IMECE2013**, San Diego, CA 2, 2013.
58. Uncertainty Propagation in Complex Codes Calculations, M. Pourgol-Mohamad, doi: 10.1115/ICONE21-16570, **ASME ICONE21**, Chengdu, China 2013.
59. An Uncertainty Importance Measure for Thermal-Hydarlucs Calculations, M. Pourgol-Mohammad, S.M. Hosseini, Proceedings of **ESREl 2013**, Amsterdam, Holland, pp 3345-3351.
60. Failure vs. Deficiency in Mechanical Systems; Clarification and Characteristics of a Confusion, M. Pourgol-Mohammad, F. Salehpour, Proceedings of **ESREl 2013**, Amsterdam, Holland, pp 1697-1706.
61. Optimization of Failure Rate of Centrifugal Pumps Using Genetic Algorithm, P. Makarachi, M. Pourgol-Mohammad, **ASME IMECE 2012**, Houston, TX.
62. An Integrated Approach for Characterization of Uncertainty in Complex Best Estimate Safety Assessment, M. Pourgol-Mohammad, M. Modarres, A. Mosleh, **OECD/CSNI Workshop on Best Estimate Methods and Uncertainty Evaluation**, Barcelona, Spain, 2011.
63. Pre-feasibility Study and Unit Sizing of a Hybrid System with Renewable Energy Resources for a GSM Tele-Communication Station in City of Tabriz, R. Amini, M. Pourgol-Mohammad, A. Ghanbari, 2013 IV International Conference on Power Engineering, Energy and Electrical Drives (**POWERENG**).

64. Phenomena Identification and Ranking for Severe Accident Uncertainty Assessment; a Systematic, Two-Dimensional Approach, S.M. Hosseini, M. Pourgol-Mohammad, Proceedings of **PSAM11/ESREL2012**, Helsinki-Finland 2012.
65. A structural methodology on severe accident uncertainty assessment; integration of input, model and output, S.M. Hosseini, M. Pourgol-Mohammad, Proceedings of **PSAM11/ESREL2012**, Helsinki-Finland 2012.
66. Reliability Test Qualification requirements for Mechanical Systems; Setting the Standards, M. Pourgol-Mohammad, Proceedings of **PSAM11/ESREL2012**, Helsinki-Finland 2012.
67. Fire Sprinkler Reliability, K. Bhimavarapu, M. Pourgol-Mohammad, **NFPA Conference 2011**, Boston MA.
68. Hybrid Fault Tree Markov Chain Methodology with Application, M. Pourgol-Mohammad, K. Sepanloo, **PSA2011** Conference, 2011, Wilmington, NC, USA.
69. Uncertainty Assessment Methodology for Probabilistic Risk Assessment (PRA); Data, Methods, Models, and Inputs, S.M. Hosseini, M. Pourgol-Mohammad, **PSA2011** Conference, 2011, Wilmington, NC, USA.
70. Integrated Methodology Thermal Hydraulics Uncertainty Analysis; Code Structure Uncertainty Analysis Approaches and Challenges, Mohammad Pourgol-Mohammad, **2010 ASME Fluids Engineering Division Summer Meeting**, Montreal, Canada
71. Experimental Study on Convective Heat Transfer Coefficient around a Vertical Hexagonal Rod Bundle, H. Makhmalbaf, J. Jafari, H. Khalafi and M. Pourgol-Mohammad, Proceedings of International Heat Transfer Conference (**IHTC-14**), August, 2010, Washington D.C., USA.
72. Development of a Qualified Nodalization for Modeling of PSB Integral Test Facility by RELAP5 System Code at Steady State Conditions, Shahedi, J.Jafari , M. Boroushaki , M. Pourgol-Mohammad and F. D'Auria, Proceedings of International Heat Transfer Conference (**IHTC-14**), August, 2010, Washington D.C., USA.
73. Integrated Methodology for Uncertainty Analysis of Thermal-Hydraulics System Codes, M. Pourgol-Mohammad, **2010 Transactions of ANS**, Volume 103.
74. Qualification for Supplied Electrical Motors: A Comparative Analysis of the Reliability of Electrical Motors from Different Suppliers, M. Pourgol-Mohammad, **PSAM10** Conference, 2010, Seattle, USA
75. Structured Treatment of Model Uncertainty in Complex Thermal-Hydraulics Codes Applications, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, **PSAM10** Conference, 2010, Seattle, USA
76. Structured Treatment of Model Uncertainty, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, Proceedings of **Model Uncertainty Workshop**, Annapolis, MD 2009/NUREG-xxxx Report
77. A Hybrid Qualitative/Quantitative Uncertainty Importance Assessment Approach: Applications to Thermal-Hydraulics System Codes Calculations, M. Pourgol-Mohamad, K. Sepanloo, **ICONE17** Conference, July 2009, Brussels, Belgium, pp. 575-581
78. Uncertainty Analysis Methodologies Survey; Comparison of Existing Methodologies with IMTHUA, M. Pourgol-Mohamad, K. Sepanloo, **ASME ICONE17** Conference, July 2009, Brussels, Belgium, pp. 405-413.
79. Application of Integrated Methodology for Thermal Hydraulics Uncertainty Analysis (IMTHUA) on LOFT Test Facility Large Break Loss of Coolant Accident, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, Proceedings of **PSAM9** Conference, May 2008, Hong Kong, China.
80. Code Structure Assessment for Thermal-Hydraulics System Code; Methods and Challenges, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, Proceedings of **PSAM9** Conference, May 2008, Hong Kong, China.
81. IMTHUA Code Structure Assessment for Thermal-Hydraulics System Code, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, Proceedings of **ASME ICONE16** Conference, May 2008, Orlando, FL, pp. 57-66.

82. Treatment of Uncertainties; Output Updating in Complex thermal-hydraulics (TH) Computational Codes, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, Proceedings of **ICONE14-89065** Conference, July 2006, Miami, FL **(Two Awards for 1st Best Research Paper)**

83. Modified Phenomena Identification and Ranking Table (PIRT) for Uncertainty Analysis; M. Pourgol-Mohamad, A. Mosleh, M. Modarres, Proceedings of **ASME ICONE14--89642** Conference, July 2006, Miami, FL, pp. 33-38 **(Award for ICONE14 Best Student Paper Competition).**

84. A General Thermal Hydraulics Uncertainty Analysis Methodology, M. Pourgol-Mohamad, A. Mosleh, M. Modarres, Proceedings of **PSAM8** Conference, May 2006, New Orleans, LA

85. Pressurizer Transients Dynamic Model, R. Zarghami, K. Sepanloo, N. Ahmari, M. Pourgol-Mohamad, Proceedings of **ASME ICONE11**, Shinjuku, Tokyo, Japan, 2003

CONFERENCE AND SEMINAR, WORKSHOPS KEYNOTE/ INVITED PRESENTATIONS/SPEECHES

1. Complex Electronics Reliability and Life Modeling Based on Physics of Failure Simulation, IEEE Reliability Society and MIT Lincoln Laboratory, December 2023,

2. Approaches and Trends in Reliability Qualification Techniques in Semiconductor Industry, International Symposium on Reliability Engineering and Risk Management (ISRERM 2022), Hanover, Germany, September 4-7, 2022 (Keynote Speaker).

3. RUL Determination Techniques Based on Probabilistic Physics of Failures (PPoF); a PRA-PHM Framework, Condition Monitoring and Fault Diagnosis (CMFD2022) Conference, Tehran-Iran, February 23, 2022 (Keynote Speaker-Virtual)

4. Design for Reliability Platforms and Practices: Consumer Products Industry Prospective and Status, 6th International Reliability and Safety Engineering Conference (IRSEC2020), February 18, 2021, Shiraz-Iran (Keynote Speaker)

5. Reliability Analysis in Electronics Industry: Tools, Approaches and Trends, 2nd Iranian Microelectronic Conference (ICM 2020), December 27th, 2020 (Keynote Speaker)

6. Exploring Approaches for Unmanned Aerial Vehicle Reliability Analysis, ASME Congress 2019 Conference, Salt Lake City, 2019.

7. Reliability and Life Certification for Critical Parts; Comprehensive Qualification Plan in Design for Reliability Processes and Standards; Case Study of HVACR Systems, BOSCON2019 Conference, Salem, MA, April 1, 2019, Invited.

8. Probabilistic Physics of Failure Analysis for Reliability and Life Estimation-Case of Fatigue, Corrosion, Creep, Entropy, BOSCON2018 Conference, Cambridge, MA, March 20, 2018, Invited.

9. Commercialization of the Startup Ideas by NSF Model; Customer-Centered Approach, UAE Iranian Entrepreneurial Assembly, May 2017, Dubai, UAE (Invited).

10. Trends and Prospective in Risk and Reliability Engineering, BOSCON2018 Conference, Salem, MA, April 1, 2017, Invited.

11. Bayesian Statistics for Uncertainty Quantification in Reliability/Risk Analysis, CALCE Center, University of Maryland, College Park, August 2016.

12. Lifetime Estimation of MEMS Devices; Case Study of RF MEMS Capacitive Switches, ASME Congress 2015 Conference, Houston, TX 2015.

13. Reliability and Availability Optimization under Uncertainty; Case Study of Wind Turbine, ASME Congress 2015 Conference, Houston, TX 2015

14. Uncertainty Quantification in Complex Codes Calculations, 14th Conference of Fuzzy Mathematics, Sahand University of Technology, 2014, Workshop.

15. Uncertainty Analysis in Complex Code Structures; Thermal-Hydraulics Perspectives, ASME ICONE22 Conference, Prague, Czech, 2014.

16. Improvement of energy and exergy efficiency of refrigerator-freezer, ASME Congress 2014, Montreal, Canada, 2014.

17. Uncertainty evaluation of renewable system performance models calculations, ASME Congress 2014, Montreal, Canada, 2014 (Poster Presentation).
18. Reliability Analysis for Early Design Stage of Electronics and Control System; Case Study of Horizontal Drilling Equipment, ASME Congress 2013, San Diego, 2013.
19. Reliability based design of an automotive dry friction clutch, ASME Congress 2013, San Diego, 2013.
20. Ageing Effect on Availability of a Typical Emergency Diesel Generator using Dynamic Reliability Block Diagram, ASME Congress 2013, San Diego, 2013.
21. Centrifugal Pump Mechanical Seal Reliability Optimization by Reliability Allocation, ASME Congress 2013, San Diego, 2013.
22. Tools and Trends in Engineering Risk Assessment of Complex Systems, 5th National HSE Symposium, March 3-5, 2014, Tehran-Iran (Key-Note Speaker)
23. Trends in Micro-Electronics Reliability Analysis and Verification, 2nd Asian Symposium on Electromagnetic and Photonics Engineering (ASEPE), 2013, Tabriz-Iran (Invited)
24. Reliability Testing, M. Pourgol-Mohammad, Workshop for 2nd Conference on Reliability Engineering, Tehran-Iran, 2011.
25. Risk-based Design and Design for Reliability; M. Pourgol-Mohammad, Workshop for 2nd Conference on Reliability Engineering, Tehran-Iran, 2011.
26. Foam Water System Reliability Analysis; Availability Estimation and Design for Life Test Qualification Requirement, S. Xu, M. Pourgol-Mohamad, NFPA 2011.
27. Structured Treatment of Model Uncertainty, Nuclear Engineering Program, Missouri University of Science and Technology, Rolla, MO, 2009. (Invited)
28. Complex Systems' Design for Reliability, Communication Research Centre, Tehran-Iran, 2009. (Invited)
29. Probabilistic Risk Analysis; The Next Generation, M. Pourgol-Mohammad, FM Global Center of Research, Norwood, MA, USA, 2009. (Invited)
30. Uncertainty in Complex Computational Codes (Case of NPP Thermal Hydraulic Codes), Workshop on Model Uncertainty, Annapolis MD, USA, 2009. (Invited)
31. Engineering Risk/Reliability Analysis Methods, Tools, and Domains of Application, Schlumberger SPC Technology Center, Sugarland, TX, 2009. (Invited)
32. Thermal-Hydraulics System Codes Uncertainty Analysis; Methodologies, M. Pourgol-Mohamad, Invited Presentation, Reactors and Accelerators Research Center, AEOI, Tehran-Iran, September 2008.
33. Structured Treatment of Uncertainty in Complex Thermal-Hydraulics Codes, M. Pourgol-Mohamad, Invited Presentation, Environmental and Occupational Safety Program, Woodruff School Nuclear & Radiological Engineering/Medical Physics Programs, Georgia Institute of Technology, Atlanta, 2008. (Invited)
34. Bayesian Updating; Applications to Uncertain Data Treatment, and Large Warranty Data Analysis, M. Pourgol-Mohamad, Invited Presentation, Center for Research, Xerox Inc., Rochester, NY 2007. (Invited)
35. Integrated Methodology for Uncertainty Analysis of TH System Codes; Foundation and Application, USNRC Center for Research, 2007.
36. Automation of Thermal-Hydraulics System Codes Uncertainty Analysis Methodology on RELAP5 System Code, Relap5 Developer Group, ISS, Idaho Falls, ID, 2005. (Invited)
37. Assessment of Model Uncertainties in Complex Thermal Hydraulics Codes, M. Pourgol-Mohammad, A. Mosleh, M. Modarres, Society of Risk Analysis (SRA) Annual Meeting, Baltimore MD, 2003.
38. Operation of Bushehr Nuclear Power Plant: Safe or Hazardous? M. Pourgol-Mohamad, International Symposium on International Affairs, Moscow-Russia, 2000. (Invited)

39. Reliability Evaluation of CTBT Treaty Monitoring System; Issues, and Modeling Suggestion, M. Pourgol-Mohamad, International Symposium on International Affairs, Shanghai-China, 1999. (Invited)

TECHNICAL/RESEARCH REPORTS

1. Pathology and Upgrading for Donar Khazar Manufacturing Co. Based on Value Chain Method, Report to Donar Manufacturing Company, 2015.
2. Gas Company Customer Service Quality Improvement by Six Sigma Methodology Using DMAIC Approach, Report to East Azerbaijan Gas Company, 2014.
3. Reliability Evaluation for Electronics and Controls of Horizontal Drilling Equipment Report, Report to Jahad Research Institute, 2012
4. Research on Evaluation of Challenges to Design and Manufacturing of Quality Home Appliance Products Report to Sahand University of Technology; Office of Research, 2014.
5. Integrated Methodology for Thermal-Hydraulics Uncertainty Analysis (IMTHUA), M. Pourgol-Mohammad, A. Mosleh, M. Modarres, Report to United States Nuclear Regulatory Commission (USNRC), Office of Research, 2007
6. A Comparison of Existing Methodologies for Uncertainty Assessment of Thermal-Hydraulics System Codes Results; Direction for Future Methodologies, M. Pourgol-Mohammad, A. Mosleh, M. Modarres, Report to USNRC, Office of Research, 2006.
7. Thermal-Hydraulic Uncertainty Analysis in Pressurized Thermal Shock Risk Assessment: Methodology and Implementation on Oconee-1, Beaver Valley, and Palisades Nuclear Power Plants," Y.H. Chang, K. Almenas, A. Mosleh, and M. Pour-Gol Mohammad NUREG/CR-6899, U.S. Nuclear Regulatory Commission.
8. Thermal- Hydraulic Uncertainty Analysis in Pressurized Thermal Shock Risk Assessment - Methodology and Implementation on Oconee, Beaver Valley, Palisades, and Calvert Cliffs Nuclear Power Plants, Y.H. Chang, K. Almenas, A. Mosleh, and M. Pour-Gol Mohammad, University of Maryland, ADAMS ML043550271, with supplementary information regarding the report's use at ML043510336.
9. Thermal-Hydraulics Simulation of Large Break LOCA of SPES Test Facility by RELAP5, M. Pourgol-Mohamad, Technical Report to IAEA, March 2000.
10. Electrical Safety Related Issues of Bushehr Nuclear Power Plant, M. Pourgol-Mohamad, Report to National Safety Department, AEOI, 1998.

PATENTS

1. Remaining Useful Life Estimator of Components of an HVAC System, M. Pourgol-Mohamad, Karl Washburn, Filed to USPatent in November 2019, **USPatent Application No. 16/683,042**, Pending Review

BOOK PUBLICATIONS

1. Reliability Engineering and Risk Assessment, M. Modarres, M. Pourgol-Mohammad Published in Farsi (Based on Original English Book), 2015.

PROFESSIONAL MEMBERSHIPS/CERTIFICATIONS

- Secretary of ASQ Risk and Reliability Division (FY 2024-2030)
- American Society of Quality (ASQ), Fellow Member 2009-Present
  - ASQ Certified Manager of Quality/Organization Excellence (CMQ/OE), 2019-Present
  - ASQ Certified Reliability Engineer (CRE), 2009-Present
  - ASQ Certified Six Sigma Black Belt (CSSBB), 2020-Present
- American Society of Mechanical Engineers (ASME), Fellow Member 2006-Present

- Chair of ASME Safety and Risk (SERAD) Executive Committee, (FY 2020-2021)
- Founder and Chair for ASME SERAD Committee for Awards and Fellow Nomination

- American Nuclear Society (ANS), Member 2007-Present
  - ANS Technical Journal Committee, Member 2012-now
  - ANS National Program Committee, Member 2020-Now
  - ANS Meetings, Proceedings and Transactions Committee, 2012-Now
- Institute of Electrical and Electronics Engineers (IEEE), Member 2008-Present
  - IEEE Reliability Society, Member, 2008-Now
- State of Maryland Professional Engineer (P.E.), 2008-2013 (Lic. No. 3670757)
- State of Maryland Professional Engineer (P.E.), 2011-now (Lic. No. 49096)

SUPERVISED PH.D. STUDENTS (6)

- Mohsen Hosseini, Science and Research Islamic Azad University, Tehran-Iran
  Research Area: Severe Accident Uncertainty Analysis, Expected Graduate Year: 2014
- Kaveh Karimi (Advisor), Science and Research Islamic Azad University, Tehran-Iran
  Research Topics: Optimization of Maintenance in Complex Systems Based on PSA Importance Results, Graduation Year: September 2014
- Farzin Salehpour, Graduation Year: September 2017
  Research: Performance Improvement of Condition-based Maintenance Process Using Optimal Sensor placement through Dynamic System Modeling under Uncertainty
- Amin Moniri-Rad, Graduation Year: November 2018
  Research: Modeling and Optimization of Operational and Management Indicators Affecting Haulage Fleet Capacity in Open Pit Mines
- Hossein Salimi, Expected Graduation Year: December 2020
  Research: Metal damage assessment in low-cycle fatigue based on thermodynamic entropy generation
- Sahand Kargarnejad, Expected Graduation Year: March 2021
  Research: Reliability Analysis for Mandible Jaw for reconstruction of the Damaged Face
- Mojtaba Raheli, Expected Graduation Year: December 2024
  Dynamic Modeling of ORC System under Uncertainty Analysis

SUPERVISED M.SC. STUDENTS (33)

- Elham Kalavani, Graduated 2019
  "Life Estimation for Nuclear Power Plants Metal Structure Under Neutron Radiation"
- Bita Soltanmohammadlou, Graduated 2018
  "Reliability and Life assessment of Gas Turbine Blade under Creep Failure Mechanism"
- Mohammad Pourmostafaei, Graduated 2018
  "Assessment of Reliability and Life Estimation for Systems under Wear failure Mechanisms"
- Aslan Kheradmand, Graduated 2015
  "Numerical Study of Utilizing Nano-fluid in a Volumetric Solar Energy Collector, Using Two-Phase Mixture Model"
- Arash Farhadi, Graduated 2016
  "Dynamic Reliability Evaluation for Satellite Attitude Control System by Fault Tree Method"
- Saeed Kiad, Graduated 2016
  "Probabilistic reliability evaluation of space system under environment condition considering physics of failure: case study of fatigue analysis"
- Jafar Asghari, Graduated 2015
  "Dynamic Reliability Evaluation of Power Plant Turbine"
- Ramin Golshan, Graduated 2016
  "Design of condition-based monitoring for industry with classic time interval based maintenance"
- Arash Mehrzad, Graduated 2016
  "Deterministic Hazard Evaluation for Natural Gas Pipes Failure"

- Ahmad Khayyati, Graduated 2016
  "Unmanned Air Vehicle Mission Assurance Based on Reliability Analysis
- Mohammad Pourghafari, Graduated 2016
  "Hazard assessment for Petroleum Products Storage Tank of Tabriz Refinery"
- Hossein Pourmohammadi, Graduated 2015
  "Integrated Deterministic and Probabilistic Reliability Analysis: Case Study of Wind Turbine"
- Parsa Sattari, Graduated 2013
  "Reliability Analysis of Wind Turbine under Uncertainty"
- Minoo Mobasher (SUT), Graduated 2015,
  "Hybrid Evaluation of Reliability in MEMS Devices"
- Amirhossein Moridian (SUT), Graduated 2014,
  "Design of Reliability and Life Test Requirements for Space Systems under Space Environmental Stresses"
- Behnaz Mokhtari (SUT), Graduated 2014,
  "Economic evaluation of hybrid energy systems; case study of optimal design for Tabriz climate region"
- Niloofar Baghersani (SUT), Graduated 2014,
  "Design and Simulation of a Cooling System with "A" Energy Efficiency Grade and Development of the Test Requirement Protocols"
- Arezoo Amirpourabasi (SUT), Graduated 2014,
  "Biological Cell Quantitative Failure Analysis under Transient Mechanical Stresses"
- Bahman Modiri (SUT), Graduated 2014,
  "Piping Anti–Corrosion Coating Reliability and Life Assessment"
- Saeid Shiri (SUT), Graduated 2014,
  "Probabilistic Fatigue Life Assessment of Fiber Reinforced Polymer Composites"
- Lida Naseh (SUT), Graduated 2014,
  "Analysis and Management the Failures of Thermal Power Plant Boiler"
- Mojtaba Mohammadpour (MAU), Graduated 2014
  "Reliability based Design and Analysis of a Twin-Shaft Turbofan Engine"
- Robab Aghazadeh-Chakherlou (IAU-TS&RB), Graduated 2014,
  "The Modified Weibull Distribution for Cooling System of Thermal Power plants Failure Data Analysis
- Somayeh Oftadeh (SUT), Graduated 2014, "
  "Modeling and Evaluation of Optimal Reliability for Composite Materials"
- Peyman Makarachi (SUT), Graduated 2013,
  "Design for Reliability of Centrifugal Pumps"
- Mohsen Hejazi (SUT) , Graduated 2013,
  "Design for Reliability of Automotive's Complex Sub-systems; Case Study of a Dry Friction Clutch"
- Morteza Soleimani (TabrizU), Graduated 2013,
  "Design for Reliability of Complex System with Limited Failure Data; Case Study of a Horizontal Drilling Equipment"
- Mahboobeh Yazdanipour (SUT), Graduated 2013,
  "Probabilistic Assessment of Fatigue Crack Growth in Automotive Components"
- Mohsen Ghiasi (SUT), Graduated 2013,
  "Modified-Layer of Protection Analysis; Application on Gas Condensate Stabilization Facility"
- Davood Vahid (SUT), Graduated 2013,
  "Reliability based design of gas condensate stabilizer unit in a petrochemical installation"
- Sima Rastayesh (SUT), Graduated 2013,
  "Dynamic Reliability Assessment for Bushehr Nuclear Power Plant Emergency Diesel Generators"
- Reza Amini (Tabriz University), Graduated 2012, (Co-Adviser)
  "Design, Control and Simulation of a Hybrid Renewable Energy System"
- Amin Moniri-Rad (SUT), Graduated 2012, (Co-Adviser)
  "Modeling of reliability for repairable haulage fleet of surface mines using reliability block diagram approach"

- Hamzeh Ansari (Tabriz University), Graduated 2012, (Co-Adviser)
  "Indirect State Feed Back Controller Design for ZMP in a Bipedal Robot"

JOURNAL EDITORIAL AND CONFERENCE/WORKSHOP ORGANIZATION

- **Associate Editor** for ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems; Part A Civil Engineering (2021-2024)
- **Associate Editor** for ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems; Part B: Mechanical Engineering (2021-2024)
- **Editorial Board,** International Journal of Reliability, Risk and Safety, June 2017-Now
- **Guest Editor**, ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems; Part-B: Mechanical Systems, Special Issue on Risk, Resilience and Reliability for Autonomous Vehicle Technologies: Trend, Techniques and Challenges (SI049B), 2022.
- **Organizer and Invited Speaker**, Congressional Briefing on Safety Technologies for Autonomous Vehicles (Sponsored by ASME), Capitol Hill, October 30, 2019
- **International Scientific Committee,** International Symposium on Reliability Engineering and Risk Management (ISRERM), Hefei, China, October 2024
- **International Technical Committee Member,** 2023 7th International Conference on Reliability Engineering (ICRE 2023), November 2023 | Bologna, Italy
- **Co-Organizer,** ASME 2022 Joint Railroad Conference, Baltimore, MD, March 2023
- **Co-Organizer**, Workshop on Prognostic and System Health management for Complex Socio-Technical Systems, ASME-Safety Engineering and Risk/Reliability Analysis Division (SERAD) and University of Maryland, College Park-Center for Rik and Reliability, October 2, 2020.
- **Co-Organizer**, Workshop on Risk Analysis of Autonomous Vehicles; Issues and Future Direction, ASME-Safety Engineering and Risk/Reliability Analysis Division (SERAD) and University of Maryland, College Park-Center for Rik and Reliability, April 26, 2019.
- **Track Co-Chair**, Session Chair (2), ASME IMECE 2019, Salt Lake City,UT
- **Track Co-Chair**, ASME IMECE 2018, Pittsburg, CA
- **Track Co-Chair**, ASME ICONE26 (London-UK)
- Member of **Technical Committee,** International Reliability and Safety Engineering Conference (IRSEC2018) (Shiraz-Iran)
- Member of **Technical Committee (Chair of 3 Sessions),** PSAM14 Conference, Los Angeles, CA 2018
- Member of **Technical Committee**, ICSRS 2017 in Milan, Italy
- Member of **Technical Committee**, ANS PSA 2017, Pittsburg, PA
- Member of **Technical Committee**, IEEE_ASTR2017, Austin, TX
- **Track Chair**, ASME IMECE 2017, Tampa, FL
- **Track Co-Chair**, ASME ICONE25, Shanghai, China, 2017
- **Guest Editor**, ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems; Part-B: Mechanical Systems, Special Issue on **Uncertainty Quantification in Multiscale Systems for Nuclear Safety and Security, 2016**
- **Guest Editor**, Springer International Journal of System Assurance and Management, Selected Papers of International Reliability Engineering Conference (IREC2016)
- **Track Chair**, ASME IMECE 2016, Phoenix, AZ
- **Associate Editor**, ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems; Part-B: Mechanical Systems
- **Technical Chair**, International Reliability Engineering Conference (IREC2016) (Tabriz-Iran)
- **Guest Editor**, Journal of Reliability Engineering and System Safety, 2015
- Journal of Applied Science, **Editorial Board**, 2010-2015
- **Track Co-Chair**, ASME ICONE24 (Charlotte, NC)
- **Editor and Founder,** ASME SERAD Newsletter, 2016-2020

- **Co-Editor**, ASQ Reliability Division Newsletter, 2015-now
- **Track Co-Chair**, **Topic Chair**, ASME IMECE 2015
- ASME ICONE23 **Track Co-Chair**
- **Topic Co-Chair**, **Session Chair**, ASME IMECE 2014 (3 sessions)
- **Technical Committee Member**/ **Special Session Chair**, PSAM12 Conference (Honolulu, Hi 2014)
- **Track Co-Chair**, **Session Chair**, ASME ICONE22 (Prague, Czech Republic)
- **Topic Chair**, **Session Chair** (3 sessions) and **Track Co-Chair**, ASME IMECE 2013 (San Diego, CA 2013)
- **Track Co-Chair** and **Session Chair**, ASME ICONE21
- **Topic Chair**, ASME IMECE 2012
- **Topic Chair**/**Session Chair**, ASME IMECE 2011
- **Reviewer Board** and **Session Co-Chair**, Member of Reli2011 Conference
- **Technical Committee Member**/ **Session Chair**, PSA2011 Conference
- **Technical Committee Member**/ **Special Session Chair**, PSAM11 Conference
- **Session Chair**, 16th International Conference on Nuclear Engineering (ICONE16),

JOURNAL AND CONFERENCE INVITED REVIEW

- ASME-ASCE Journal of Risk and Uncertainty in Engineering Systems Part A and B (17 papers)
- Annals of Nuclear Energy, (6 Papers)
- 2019 ASME International Mechanical Engineering Congress & Exposition (IMECE2018), 8 Papers
- Journal of Loss Prevention in the Process Industries (9 paper)
- 2019 ASME International Mechanical Engineering Congress & Exposition (IMECE2018), (4 Papers)
- Marine Engineering, (3 papers)
- iMeche Journal of Risk and Reliability (JRR), (6 papers)
- 2018 ASME International Mechanical Engineering Congress & Exposition (IMECE2018), 5 Papers
- ASME ICONE26 (2018) Conference, (5 Papers)
- IRSEC2018 Conference (11 Papers)
- Journal of Modarres Mechanic (6 Paper)
- ASME ICONE25 Conference, (10 Papers)
- Results in Physics, (1 paper)
- Chemical Engineering Research and Design, (1 Paper)
- ANS Nuclear Technology (NT), (2 Paper)
- 2016 Iranian Mechanical Engineering Conference (ISME2016), (8 Papers)
- ASME Journal of Risk and Uncertainty in Engineering Systems, (6 papers)
- International Journal of Fatigue (2 Papers)
- IREC2016 Conference, (6 papers)
- 2016 ASME International Conference on Nuclear Engineering (ICONE24), (4 Papers)
- Nuclear Technology, (4 Paper)
- Journal of Propulsion Power Research (1 paper)
- Journal of Reliability Engineering and System Safety, (12 Papers)
- 2015 ASME International Mechanical Engineering Congress & Exposition (IMECE2015),(6 Papers)
- 2015 ASME International Conference on Nuclear Engineering (ICONE23), (4 Papers)
- Sage IMeche part D, Journal of Automobile Engineering (1 Paper)
- 3nd Conference of Reliability Engineering 2014, Tehran-Iran, 6 papers
- Journal of Chemical Product and Process Modeling (CPPM) (1 paper)
- International Journal of Maritime Technology (1 Paper)
- 14th Iranian Conference on Fuzzy Systems (3 Papers)
- 2014 ASME International Mechanical Engineering Congress & Exposition (IMECE2014), 5 Papers

- 2014 ASME International Conference on Nuclear Engineering (ICONE22), 4 Papers
- 2013 ASME International Mechanical Engineering Congress & Exposition (IMECE2013), 4 Papers
- 2013 ASME International Conference on Nuclear Engineering (ICONE21), 4 Papers
- Proc. IMechE, Part D: Journal of Automobile Engineering (1 Paper)
- Journal of Risk Analysis, 5 Papers
- PSAM11/ESREL2012 Conference, 6 Papers
- 2012 ASME International Mechanical Engineering Congress & Exposition (IMECE2012), 5 Papers
- 2011 ASME International Mechanical Engineering Congress & Exposition (IMECE2011), 4 Papers
- 2nd Conference of Reliability Engineering 2011, Tehran-Iran, 3 papers
- 2010 International Mechanical Engineering Congress & Exposition (IMECE2010), 1 Papers
- ASME 2010 Fluids Engineering Summer Meeting (FEDSM2010), 2 Papers
- Journal of Nuclear Science and Engineering, 1 Paper
- 2009 ASME International Conference on Nuclear Engineering (ICONE17), 8 Papers
- 2008 ASME International Conference on Nuclear Engineering (ICONE16), 3 Papers
- 2005 ASME International Mechanical Engineering Congress & Exposition (IMECE2005), 4 Papers
- 2001 ASME International Conference on Nuclear Engineering (ICONE11), 2 Papers

COMPUTER AND SOFTWARE SKILLS

- Reliability/Risk Analysis Software: PTC Windchil (Former Relex), SAPHIRE, CAFTA, Reliasoft (ALTA, BLOCKSIM, Weibull++7, RGA, DOE++), RAVEN and Winbug14.
- Energy System Software: HOMER, MATLAB, POWERSYSTEM Toolbox.
- Optimization: Matlab Optimization Toolbox, Ansys Mechanical, Ansys Sherlock
- Programming languages: FORTRAN 90, Engineering Equation Solver(EES), MATLAB,
- Statistical/Risk Analysis Tools: SAS Warranty, JMP, Minitab, @Risk,
- Microsoft office (Word, Access, MS Excel, Power Point, SQL Server
- Project management: Mapics, Microsoft Project, dotProject, SAP

LANGUAGE INFORMATION AND HOBBIES

- Language: Persian (Native), Turkish (Native), English (Fluent), Arabic (Fair)
- Hobbies: Hiking, Wordle/Spelling Bee, Ney Instrument (Flute), Biking, Reading, Family and Socio-Cultural Activities

COURSES AND STUDENTS COURSE EVALUATIONS

Semester	Course Title	No. of Credits	Number of Students	Overall Ratings (Max. 20.0)	Grad (G)/ Undergrad (U)	Comments
Spring 2011	Reliability Engineering and Risk Analysis	3	3	20.0	U/G	
Fall 2011	Engineering Probability and Statistics	3	37	18.17	G	Co-Instructor
	Reliability Engineering and Risk Analysis	3	10	18.38	U/G	
Spring 2012	Research Methods	3	4	19.35	G	
	Engineering Risk Assessment	3	6	19.13	G	Mining Eng. Dep.

Semester	Course Title	No. of Credits	Number of Students	Overall Ratings (Max. 20.0)	Grad (G)/ Undergrad (U)	Comments
Fall 2012	Energy Systems Analysis I	3	13	19.21	G	
	Advanced Mathematical Programming	3	13	19.56	G	
	Reliability Engineering and Risk Analysis	3	17	19.45	U/G	
	Process Engineering	3	13	19.33	G	Co-Instructor
Spring 2013	Engineering Risk Assessment	3	7	19.67	G	Civil Engineering Dept.
	Energy Modeling	3	7	19.47	G	
Fall 2013	Energy Systems Analysis I	3	10	18.12	G	
	Advanced Mathematical Programming	3	12	18.80	G	
	Advanced Engineering mathematics	3	21	18.57	G	Co-Instructor
	Process Engineering	3	8	19.33	G	Co-Instructor
Spring 2014	Reliability Engineering and Risk Analysis	3	12	19.34	U/G	
Fall 2014	Energy Systems Analysis	3	6	17.52	G	
	Advanced Mathematical Programming	3	6	17.16	G	
	Optimal Design of Mechanical Elements	3	14	18.34	G	
	Process Engineering	3	6	17.27	G	Co-Instructor
Spring 2015	Reliability Engineering and Risk Analysis	3	8	18.62	U/G	
	Energy Modeling	3	6	18.92	G	
	Statistics	3	27	19.24	U	Co-Instructor
Fall 2015	Energy Systems Analysis	3	8	19.88	G	
	Advanced Mathematical Programming	3	8	19.88	G	
	Optimal Design of Mechanical Elements	3	4	17.90	G	
	Process Engineering	3	8	19.88	G	Co-Instructor
Spring 2016	Reliability Engineering and Risk Analysis	3	9	19.39	U/G	
	Uncertainty Analysis and Hazard Management Fundamental	3	2	20.00	G	Civil Eng. Dept.
	Mechanical Technical Language	2	21	17.90	U	
Fall 2016	Energy Systems Analysis	3	15	18.20	G	

Semester	Course Title	No. of Credits	Number of Students	Overall Ratings (Max. 20.0)	Grad (G)/ Undergrad (U)	Comments
	Advanced Mathematical Programming	3	15	17.84	G	
	Mechanical Reliability Engineering	3	3	20	G	
Spring 2017	Reliability Engineering and Risk Analysis	3	11	18.05	U/G	
	Energy Modeling	3	13	17.16	G	
	Mechanical Technical Language	2	19	18.04	U	
Summer 2021	Design and Analysis for Resiliency	3	6	--	G	
Summer 2021	Design and Analysis for Resiliency	3	6	--	G	

FUNDING HISTORY:

Project Title	Project Summary	Sponsor	Contract	Number Period	US$ (Equivalent)
HAZID Analysis for EA Gas Company Facilities	Quantitative Risk Analysis of the construction process of the East Azarbaijan Gas pipes and pressure regulator equipment taking into account scenarios involving leaks, underground blowouts and.	EA Gas Company	125/34/67	02/2012 to 02//2014	$125,000
Design for Reliability of Home Appliances	Reliability modeling of Home appliance with embedded electronics for the control taking into account workover events. The following configurations are analyzed: (i) The Washer Fuzzy Controller; (ii) The Defrost System of the Refrigerators; (iii) Gas Heater Burner and safety features	Donar Home Appliances Manufacturing Company (40%), Industrial Cities and Small Companies Organization (60%)	23/45/1394	04//2014 to 04/2016	$100,000

Project Title	Project Summary	Sponsor	Contract Number	Period	US$ (Equivalent)
Creation of the Center for Risk Analysis and Environmental Modeling	Construction of the infrastructure for the Center for Risk Analysis and Environmental Modeling with 1,500 sq-m space the following labs: (i) Virtual Reality Lab equipped with a 4 sided active immersive CAVE; (ii) Parallel Computing Lab with a computational cluster with 5 TFLops and 1 TESLA with 4 GPUs for additional 2 TFlops and (iii) Shock and Vibration Tests Lab with capacity of 12,000 lb sinusoidal, 12,000 lbf RMF,	Ministry of Science and Higher Education (75%) Sahand University of Technology (25%)	4600224184	10/16/2012 to 04/28/2015	$150, 000
Satellite Mission Assurance Assessment	The Structure for a reliability simulation lab is design and a case study is examined. A mission assurance propulsion software is designed and Version Beta is delivered.	Ministry of Communication	23/67/98-01	09/2012 to 09/2015	$123,000
Reliability Lab Design and Implementation	The structure of a X-Ware Reliability and Failure Analysis Lab Designed; The Lab Structure, the equipment, the lab staff and test procedures are all documented; Phase two will actual lab foundation (not included in this project)	Niroo Research Institute	96/TH/3977	05/2016 to 07/2017	$150,000
Safety of Connected AV Systems and PHM for Complex Systems	A workshop held for the topics by assembling the experts in area of the AV connected systems and PHM for Complex Systems along with a team from that event invited to Capitol Hill to brief the members of the House about status of the safety Technologies.	ASME	----------	09/2018 to 06/2020	$22000