# Yalda Khashe

Lecturer of Industrial and Systems Engineering
Viterbi School of Engineering, USC
Khashe@usc.edu ● Website

## Education

**University of Southern California**
*Postdoctoral Research Associate*
Viterbi Technology Innovation and Entrepreneurship
Advisor: Dr. Andrea Belz

*Ph.D. in Industrial and Systems Engineering*
Dissertation: "Human and organizational integration of PTC in railroad and developing an HRO-centric methodology for aligning technological and organizational change."
Advisor: Dr. Najmedin Meshkati

**University of Texas at Arlington**
*M.Sc. in Industrial Engineering*

## Current Position

**University of Southern California**
*Lecturer,* Daniel J. Epstein Department of Industrial and Systems                    2019-Present

*Teaching areas:*
Human Factors and Ergonomics, Human-Computer Interface Design, Six Sigma and Lean Operations, Project Management, Design and Management of Engineering Teams, Probability Concepts in Engineering, Work, Technology and Organizations

*Research areas:*
- Human-Systems Integration of new technologies in safety-critical domains including healthcare, aviation, and transportation
- Developing proactive safety and reliability analysis of complex safety-critical technological systems and evaluating the role of the operator improvisation in tackling ambiguity and enhancing resiliency.
- Evaluation of High Reliability Organization (HRO) Characteristics and their applications to safety-critical systems including railroad, aviation, and healthcare industries.
- Systematic Analysis of Digital Healthcare Impact on Patient Safety and Improving Quality of Care for Patients Receiving Care through Telehealth in the COVID-19 Era

## Other Academic Teaching Experiences

**University of Southern California**                                                   2018-2019
*Part-time lecturer,* Daniel J. Epstein Department of Industrial and Systems Engineering
Courses: Human-Computer Interface Design, Work, Technology, and Organization

**California State University, Dominguez Hills**                                        2015-2017
*Adjunct Faculty*, College of Business Administration and Public Policy
Courses: Operations Research and Business Statistics (on-line graduate course), Introduction to Business Statistics, Operations Management

**Pepperdine University**                                                              2016
*Adjunct Faculty*, Graziadio School of Business and Management
Courses: Quantitative Analysis for Business Operations (MBA course)

**Academic Research Experiences and Related Projects**

**University of Southern California**
*Postdoctoral Research Associate,* Viterbi Technology Innovation and Entrepreneurship    2018-2019
***Research Projects:***
- Use of Other Transaction Agreements to Facilitate Government-Industry Procurement Processes
- Technology Transfer at Airforce Research Laboratory

**University of Southern California**
*Doctor of Philosophy Candidate,* Daniel J. Epstein Department of Industrial and Systems    2011-2017
***Selected Research Projects:***
- Technical and Safety Evaluation of the Southern California Regional Rail Authority Positive Train Control Deployment Project
- Protective Services After Action Report for Fire, EMS, and Rescue Operations in Response to December 2, 2015, Waterman Shooting in San Bernardino City, Associate Investigator, San Bernardino County Fire Department
- Customized Dashboard for Reliability Assessment of High-Risk Operations
- Evaluation of Surgical Team Performance using High Reliability Organizations Principles

**Academic Publications**
*Student advisees are indicated with a* (*)

**Y. Khashe**, M. Tabibzadeh, and N. Meshkati (In Progress), Improving Quality of Care for Patients Receiving Care through Telehealth in the Time of COVID-19 Global Pandemic and Beyond: HCI-based Leading Indicators for Virtual Visits

**Y. Khashe**, M. Tabibzadeh, Daisy Zhou* (2021), Improving quality of care in virtual visits: heuristic evaluations of the user interface in telehealth, 65th International Annual Meeting of the Human Factors and Ergonomics Society, Baltimore, MD

**Y. Khashe**, M. Tabibzadeh (2021), Interoperability in Healthcare Systems: The Application of HRO Principles in New Technology Implementation in Digital Healthcare, Proceedings of the AHFE Virtual Conference, USA

**Y. Khashe**, S. Levy* (2020), A High Reliability Organization (HRO)-Based Retrospective Analysis of Boeing 737 Max Crashes, Proceedings of the Human Factors and Ergonomics Society Annual Meeting, Chicago, IL

**Y. Khashe**, N. Meshkati (July 2020), New Technology Implementation in High-Risk Organizations-The Application of HRO Principles in New Technology Implementation in Railroad Industry, Advances in Human Aspects of Transportation, Proceedings of the AHFE Virtual Conference on Human Aspects of Transportation, July 16-20, 2020, USA

**Y. Khashe**, N. Meshkati (November 2019), Human and Organizational Factors of Positive Train Control Safety System, The Application of High Reliability Organizing in Railroad, 63rd International Annual Meeting of the Human Factors and Ergonomics Society, Seattle, WA

M. Tabibzadeh, **Y. Khashe**, P. Somaiya (2019) A Proactive Risk Analysis Framework to Enhance Safety and Reliability in Railroad Operations: Assessment of the Positive Safety Culture Traits. In: Stanton N. (eds) Advances in Human Aspects of Transportation. AHFE 2018. Advances in Intelligent Systems and Computing, vol 786. Springer.

**Y. Khashe,** and N. Meshkati (2016). Evaluation of Human-Systems Interaction of the PTC Technology in Railroad. IIE Annual conference proceedings, Nashville, TN.

N. Meshkati, and **Y. Khashe** (2015, March). Operators' Improvisation in Complex Technological Systems: Successfully Tackling Ambiguity, Enhancing Resiliency and the Last Resort to Averting Disaster. Journal of Contingencies and Crisis Management.

G. Placencia, N. Meshkati, J. Moore and **Y. Khashe** (2014) Technology and High Reliability Organizations in Railroad Operations Safety: A Case Study of Metrolink / SCRRA and Positive Train Control (PTC) Implementation. Joint Rail Conference. Colorado Springs, CO.

**Other Publication**

N. Meshkati and **Y. Khashe** (December 19, 2016), Not Just "Human Error": Observations/Lessons from Major Train Accidents, Questions and Suggestions for Iran, Shargh Daily, Iran (in Farsi)

**Honors & Awards**

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| Outstanding Teacher of the Year, Industrial and Systems Engineering, USC | 2021 |
| Best Dissertation Award in Industrial and Systems Engineering, USC | 2018 |
| Award for Excellence in Teaching, University of Southern California | 2016 |
| Award of Excellence in Education, Association Professors and Scholars of Iranian Heritage | 2016 |
| Outstanding Achievement in Doctoral Education in Industrial and Systems Engineering, APSIH | 2016 |
| Diploma in Innovation, University of Southern California | 2014 |
| The Order of Areté, Exemplary Leadership Award, University of Southern California | 2011 |
| Tau Beta Pi, Engineering Honor Society | 2009 |
| The Golden Key, The International Honor Society | 2009 |

**Selected Conference Presentations**

Human Factors and Ergonomics Society 65th Annual Meeting, Baltimore, MD          October 2021
Presentation title: *"Improving quality of care in virtual visits: heuristic evaluations of the user interface in telehealth"*

2021 INFORMS Annual Meeting, Anaheim, CA          October 2021
Presentation title: *"Performance Factors Influencing the Service Reliability and Service Interruption in Train Operations Under PTC"*

12th International Conference on Applied Human Factors and Ergonomics          July 2021
Presentation title: *"Interoperability in Healthcare Systems: The Application of HRO Principles in New Technology Implementation in Digital Healthcare"*

Human Factors and Ergonomics Society 64th Annual Meeting, Virtual          October 2020
Presentation title: *"A High Reliability Organization (HRO)-based Retrospective Analysis of Boeing 737 Max Crashes"*

11th International Conference on Applied Human Factors and Ergonomics, Virtual          July 2020
Presentation title: *"New Technology Implementation in High-Risk Organizations-The Application of HRO Principles in New Technology Implementation in Railroad Industry"*

Annual Meeting of the Human Factors and Ergonomics Society, Seattle, WA          October 2019
Presentation title: *"Human and Organizational Factors of Positive Train Control Safety System, The Application of High Reliability Organizing in Railroad"*

Annual IIE Conference and Expo, Nashville, TN          May 2015
Presentation title: "*Evaluation of Human-Systems Interaction of the PTC Technology in Railroad*"

INFORMS annual meeting, Bridging data and decision, San Francisco, CA          November 2014
Presentation title: "*Systems Integration Issues of Implementing the Positive Train Control Technology in Railroad: A Simulation-based Study.*"

Eight International HRO Conference, Sustaining High reliability, Fort Worth, TX          March 2014
Presentation title: "*The Path to Becoming an HRO Integrating Safety, Risk and Quality Management.*"

Sixth International HRO Conference          April 2013
The practical and human side of High Reliability Organizing, Midland, MI
Presentation title: "*HRO and Railroad*"

Fifth International HRO Conference          May 2012
Seeking Reliability through Operations, Attitudes, and Measuring Success, Chicago, IL
Presentation Title: "*Using Simulation to Implement HRO Characteristics Applications to the Railroad Industry*"

## Service and Affiliation

**Professional Organizations**

*Faculty Advisor,* Institute of Industrial and Systems Engineering, USC Student Chapter　　　Present
*Faculty Advisor,* Human Factors and Ergonomics Society, USC Student Chapter　　2020-Present
*Member*, Human Factor and Ergonomic Society, IISE

## Teaching Excellence Certificates and Faculty Learning Programs

*Stem Faculty Teaching Learning Program (FTLP),* Inaugural Cohort　　2020-2021
American Association for the Advancement of Science (AAAS), *The SEA Change course Building Gender Equity in the Academy*　　Spring 2021
*American Society for Engineering Education (ASEE),* The National Effective Teaching Institute　　Summer 2020
*USC Center for Excellence in Teaching (CET),* Accelerated Online Teaching Institute　　Spring 2020
*USC Center for Excellence in Teaching (CET),* New Faculty Institute　　2019-2020

## Professional Experiences

**Soteria Company,** Los Angeles, CA　　2018
*System Safety Engineer*

- Developed System Safety Program Plans, Safety Certification Program Plans, Preliminary Hazard Analysis and System / Subsystem Hazard Analysis for local transit and light rail systems
- Developed Design Conformance Checklists and Construction/Specification Conformance Checklists for local transit and light rail systems
- Performed and verified Design and Construction Checklists and reviewing the adequacy of the verification evidence.
- Attended the Fire / Life Safety and Safety Certification Meetings

**Butane Company, Strategic Management Department**, Tehran, Iran
*Project Manager*　　2005-2007

- Developed business plans for new services and products
- Analyzed organizational processes and potential process improvements
- Managed projects by defining the scope, developing timetables and schedule for project activities, monitoring, and reporting the project progress
- Collecting, analyzing, and processing customers' required information
- Create the Work Breakdown Structure for this SW development project with Agile Methodology.
- Track plans and schedules, solicit regular updates, identify, and resolve critical path and network logic conflicts.
- Utilizes Gantt, PERT, and milestone charts to gauge progress and identify performance variances to facilitate focus and intervention in critical areas.

**Eastarnegar International Engineering Co.,** Tehran, Iran
*Quality Management and Systems Engineering Consultant*　　2001-2005

- Developing and Implementing Quality & Environmental Management Systems based on International Standards such as ISO 9000, ISO 14001.
- System Analysis and Assessment through Gap Analysis, Process mapping, Process improvement, Validation, and verification.
- Internal audit, Document audit, Surveillance audit, Supplier Evaluation

## Non-degree Training and Certificates

Six Sigma, Tehran House of Quality
ISO 9001:2000 Internal Audit, EIE (Engineering Consultant Co.)
Introduction to ISO 9001:2000, RWTUV
Value Management, AFAV (French association for Value Engineering)