

## Yalda Khashe

Lecturer of Industrial and Systems Engineering at University of Southern California  
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### Education

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#### 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

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#### University of Southern California

*Faculty Lecturer*, Daniel J. Epstein Department of Industrial and Systems

2019-Present

##### **Research areas:**

- Human and organizational factors of new technology integration in complex technological systems
- 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

##### **Teaching areas:**

Human Factors and Ergonomics, Six Sigma and Lean Operations, Project Management, Design and Management of Engineering Teams, Probability Concepts in Engineering

### Academic Research Experiences and Related Projects

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#### 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

##### **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 (\*)*

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- Y. Khashe**, M. Tabibzadeh, and N. Meshkati (Under Review), 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 (2021), Improving quality of care in virtual visits: heuristic evaluations of the user interface in telehealth, 64th International Annual Meeting of the Human Factors and Ergonomics Society, Baltimore, MD (Accepted)
- 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 (Accepted)
- A. Gleiser\*, **Y. Khashe** (2021), Prenatal Care During COVID-19: The Effects of Digital Health on the Quality Care for Expectant Mothers, IISE Annual Conference (Accepted)
- 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, Cham
- 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 / SCRRRA and Positive Train Control (PTC) Implementation. Joint Rail Conference. Colorado Springs, CO.

## Other Publication

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- 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	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

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## Invited Presentations

Eight International HRO Conference Sustaining High reliability, Fort Worth, TX Presentation title: “ <i>The Path to Becoming an HRO Integrating Safety, Risk and Quality Management.</i> ”	March 2014
Sixth International HRO Conference The practical and human side of High Reliability Organizing, Midland, MI Presentation title: “ <i>HRO and Railroad</i> ”	April 2013
Fifth International HRO Conference Seeking Reliability through Operations, Attitudes, and Measuring Success, Chicago, IL Presentation Title: “ <i>Using Simulation to Implement HRO Characteristics Applications to the Railroad Industry</i> ”	May 2012

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## Selected Conference Presentations

11th International Conference on Applied Human Factors and Ergonomics Presentation title: “ <i>New Technology Implementation in High-Risk Organizations-The Application of HRO Principles in New Technology Implementation in Railroad Industry</i> ”	July 2020
Human Factors and Ergonomics Society 64th Annual Meeting Presentation title: “ <i>A High Reliability Organization (HRO)-based Retrospective Analysis of Boeing 737 Max Crashes</i> ”	October 2020
Annual Meeting of the Human Factors and Ergonomics Society, Seattle, WA Presentation title: “ <i>Human and Organizational Factors of Positive Train Control Safety System, The Application of High Reliability Organizing in Railroad</i> ”	October 2019
Annual IIE Conference and Expo, Nashville, TN Presentation title: “ <i>Evaluation of Human-Systems Interaction of the PTC Technology in Railroad</i> ”	May 2015
INFORMS annual meeting, Bridging data and decision, San Francisco, CA Presentation title: “ <i>Systems Integration Issues of Implementing the Positive Train Control Technology in Railroad: A Simulation-based Study.</i> ”	November 2014

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## Other Academic Teaching Experiences

<b>University of Southern California</b> <i>Part-time lecturer</i> , Daniel J. Epstein Department of Industrial and Systems Engineering Courses: Human-Computer Interface Design, Work, Technology, and Organization	2018-2019
<b>California State University, Dominguez Hills</b> <i>Adjunct Faculty</i> , College of Business Administration and Public Policy Courses: Operations Research and Business Statistics (on-line graduate course), Introduction to Business Statistics, Operations Management	2015-2017
<b>Pepperdine University</b> <i>Adjunct Faculty</i> , Graziadio School of Business and Management Courses: Quantitative Analysis for Business Operations (MBA course)	2016

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## Synergistic Activities

Student Research/ Fellowship Supervision: Arianne Gleiser - Project: <i>Prenatal care during COVID-19: the effects of Digital Health on the quality of care for expectant mothers</i> Daisy Zhou - Project: <i>Developing an evaluative framework of virtual visit in healthcare</i> Hannah - Project: <i>The impact of Digital Health interventions on the quality of care for children with an autism spectrum disorder</i> Janet Choi - Project: <i>Performance Indicators in Virtual Education Systems for Adolescent Students with Attention-Deficit/Hyperactivity Disorder During the COVID-19 Era</i>	
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## Service and Affiliation

<i>Faculty Adviser</i> , Human Factors and Ergonomics Society, USC Student Chapter	Present
<i>Vice President</i> , Human Factors and Ergonomics Society, USC Student Chapter	2015-2016
<i>Administrative officer</i> , Iranian Graduate Student Association	2010
<i>Future Engineering Chair Officer</i> , Tau Beta Pi Engineering Honor Society	2009
<i>Reviewer</i> , Journal of Contingencies and Crisis Management	

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## Professional Experiences

<b>Soteria Company</b> , Los Angeles, CA <i>System Safety Engineer</i>	2018
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- 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

<i>Project Manager</i>	2005-2007
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- 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

<i>Quality Management and Systems Engineering Consultant</i>	2001-2005
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- 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

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## 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)

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