# SALEM NAEERI

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# **EDUCATION**

# Ph.D., Industrial & Systems Engineering

2020

University of Oklahoma, USA

• Thesis: Multimodal Analysis of Pilots' Fatigue During a Multi-Phase Flight Mission

### M.S., Engineering Management

2006

Coventry University, United Kingdom

• Thesis: Implementation of Total Quality Management in Libyan manufacturing organizations

# **B.Tech, Aircraft Maintenance Engineering**

1994

Civil Aviation and Meteorology Higher Institute, Libya

### PROFESSIONAL EXPERIENCE

#### ADJUNCT PROFESSOR

Midwestern university, texas, usa

2024-Current

Teaching courses on innovation, production planning, and energy technology.

#### POST-DOCTORAL RESEARCHER

University of Oklahoma, USA

2020-2022

Developed non-text-based smart learning in multi-person VR using eye movements, brain activities, and haptic interactions.

• Implemented a thorough and systematic approach to classify various research methodologies that apply virtual reality-based resources in the field of education.

### **GRADUATE RESEARCH ASSISTANT**

University of Oklahoma, USA

2014-2020

Analyzed the effect of expertise on the task performance of pilots in a simulated long flight mission. This study included:

- Investigating differences in eye movement characteristics between novice and experienced pilots during normal and adverse flight conditions (instrument failure scenarios).
- Examining changes in fatigue levels among pilots with varying expertise during a multi-segment flight task (multiple takeoffs and landings).
- Exploring the relationship between pilot fatigue (measured using traditional metrics

like reaction time, false starts, and number of lapses) and eye movement attributes.

### Predicting pilot fatigue using eye movement measures.

- Conducted an experiment with expert and novice pilots, involving a simulated long-haul flight scenario with multiple takeoff and landing tasks.
- Developed stepwise regression model where pilots' eye movement attributes are used to predict their fatigue levels, with high overall model accuracy around 75%.

#### **ASSISTANT LECTURER**

Technical College of Civil Aviation and Meteorology, Libya

2009-2013

## **Taught courses:**

- Applied Ergonomics
- Cognitive engineering
- Environmental Safety Management
- Statistics I
- Statistics II
- Engineering Statistics I
- Engineering Statistics II
- Algebra with Applications
- Calculus I
- Human Factors in Aircraft Maintenance
- Aviation Legislation and Regulations
- Aviation Management:
- Aircraft Materials and Hardware, I and II
- Statistical Analysis System Design
- Lean Manufacturing Operation and Design
- Systems Engineering

#### **QUALITY CONTROL SPECIALIST**

New Orbit Telecom Company, Tripoli, Libya

2007-2009

- Participated in the business renovation project with Sofrecom to enhance and implement the operations map framework in the New Orbit Company.
- Participated in developing the Quality Management Systems' plan "Develop FMEA and risk analyses plan for New Orbit Company.

# AWARDS & CERTIFICATES

Libyan-North American Scholarship Program
 Libyan Ministry of Higher Education and Scientific Research

2014-2020

• The Libyan-British Scholarship Program
Libyan Ministry of Higher Education and Scientific Research

2004-2006

<ul> <li>Public Management and Leadership</li> </ul>	2012
London School of Economics, London, UK	
Strategic Thinking: A Macro and Micro Perspective London School of Economics, London, UK	
• Robberson Conference Presentation & Creative Exhibition Travel Grant University of Oklahoma, USA	2019

## **PUBLICATIONS**

#### **JOURNALS**

- 1. Naeeri, S. M., Kang, Z., & Palma Fraga, R. (2022). Investigation of Pilots' Visual Entropy and Eye Fixations for Simulated Flights Consisted of Multiple Take-Offs and Landings. Journal of Aviation/Aerospace Education & Research, 31(2). Retrieved from https://commons.erau.edu/jaaer/vol31/iss2/2
- 2. Naeeri, S., Kang, Z., Mandal, S., Kim, K. Multimodal Analysis of Eye Movements and Fatigue in a Simulated Glass Cockpit Environment. Aerospace 2021, 8, 283. https://doi.org/10.3390/aerospace8100283

#### **CONFERENCES**

- 1. **Naeeri, S.**, Mandal, S. & Kang, Z (2019). Analyzing pilot fatigue for prolonged flight mission: Multimodal analysis approach using vigilance test and eye tracking. In Proceedings of the Human Factors and Ergonomics Society 63rd Annual Meeting, Oct. 28- Nov. 1, Seattle, WA.
- 2. Naeeri, S., & Kang, Z. (2018). Exploring the relationship between pilot's performance and fatigue when interacting with cockpit interfaces. In Proceedings of the 2018 Institute of Industrial and Systems Engineers (IISE) Annual Conference (pp. 1-5), May 19-22, Orlando, FL.
- 3. **Naeeri, S.**, Mandal, S., & Kang, Z (2018). Exploring the effect of fatigue on pilot performance during single and multi-takeoffs and landings flight missions. In Proceedings of the 7th Annual World Conference of the Society for Industrial and Systems Engineering, Binghamton, NY, USA.
- 4. Naeeri, S., & Kang, Z. (2017). Analysis of Pilot's Visual Scanning Characteristics under Normal and Extreme Flight Conditions. In Proceedings of the 6th Annual World Conference of the Society for Industrial and Systems Engineering, Herndon, VA.

### **SKILLS**

#### **Data Analytics**

• Statistical modelling and analysis, Regression (linear and non-linear), Clustering, Hypothesis testing, ANOVA, MANOVA, Optimization, Visualization

#### **Programming**

• R, Python, SAS, SPSS, Minitab, AweSim, APIS IQ-Software (IQ: Integrated Quality),

#### Arena

### Specialty

• Eye Tracking (Tobii Studio, Tobii Pro Analysis), Mixed-Methods Study, Human Factors, Experimental Design and Analysis

# PROFESSIONAL SERVICE

#### Membership

2022- current Member of Puget Sound Human Factors and Ergonomics Society (PSHFES).

2022- current Member of Institute of Industrial and Systems Engineers (IISE).

2019- current Member of Human Factors and Ergonomics Society (HFES).

2022-current Member of Human Factors and Ergonomics Society Europe Chapter (HFES EC)

### **Journal and Conference Paper Reviewer**

2021-current. Reviewer for the International Journal of Aerospace Psychology.

2022- current. Reviewer for the Engineering Management Journal.

2022-current. Reviewer for the Researcher Academy.

2022-current. Reviewer for Annual Meeting of the Human Factors and Ergonomics Society.

2022-current. Reviewer for the HFES International Annual Meeting - Health Care.

2022-current. Reviewer for the Science Publishing Group- Industrial Engineering (IE)

# **REFERENCES**

#### • Dr. Ziho Kang

Associate Professor, School of Industrial & Systems

Engineering

Email: zihokang@ou.edu

Website: https://www.ou.edu/coe/ise/people/ziho-kang

### • Prof. Randa Shehab

Professor, School of Industrial & Systems Engineering

Associate Dean for Academic Affairs, Gallogly College of Engineering

Nettie Vincent Boggs Professor, School of Industrial Systems Engineering

Email: rlshehab@ou.edu

Website: https://www.ou.edu/coe/ise/people/randa l shehab

### • Prof. Theodore B. Trafalis

Professor, School of Industrial & Systems Engineering

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