

Dr. Farin Khanehshenas

Assistant Professor of Ergonomics

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sciences, Tehran

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Education

2017-2022

[Ph.D. in Ergonomics](#)

Tehran University of Medical Sciences, Tehran, Iran.

Thesis Title: “Presentation and evaluation of driver drowsy recognition dynamic model with an approach of contextual and practical multiple variable fusion based on Bayesian Network and Hidden Markov Model”.

2011-2014

[M.Sc. in Ergonomics](#)

Urmia University of Medical Sciences, Urmia, Iran.

Thesis Title: “Investigation of the relationship between psychosocial stressors and job performance among bank employees”.

2007-2009

[B.Sc. in Occupational Health](#)

Urmia University of Medical Sciences, Urmia, Iran.

Honors and Awards

Ranked in the national university entrance exam for a Ph.D. degree in ergonomics in 2018.

Selected as the best thesis for “Presentation and evaluation of driver drowsy recognition dynamic model with an approach of contextual and practical multiple variable fusion based on Bayesian Network and Hidden Markov Model.” 6th International Reliability and Safety Engineering Conference, Tehran, Iran, 2023.

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Ranked 1st in the knowledge translation festival, focusing on traffic accidents. Tehran, Iran, 2023.

Research interests

- Cognitive Ergonomics
- Macro Ergonomics
- Environmental Ergonomics
- Automotive Ergonomics
- Physical Ergonomics
- Office Ergonomics

Work experiences

2024-Present Iran University of Medical Sciences, Tehran, Iran

Assistance

2015-2017 Urmia University of Medical Sciences, Urmia, Iran

Lecturer & Lab expert

2014-2019 University of Applied Science. Urmia, Iran.

Lecturer

2021-Present Prana Occupational Medicine Center. Tehran, Iran.

Ergonomics specialist

2013-2019 Rama Electric Company. Urmia, Iran.

Ergonomics and occupational health expert

2019-present

Reviewer

- Work (indexed in ISI, Scopus, and PubMed, Tehran, Iran)
- International Journal of Occupational Hygiene (indexed in DOAJ)
- Journal of Health and Safety at Work (indexed in DOAJ and Web of Sciences)
- Medical Journal of the Islamic Republic of Iran (indexed in PubMed and Scopus)

Language

- Turkish
- Persian
- English

Skills

- ✓ Biometrics signal processing (RR and RRV, thermal imaging)
- ✓ Observer-based subjective evaluation techniques of fatigue (NEDO, ORD, etc.)
- ✓ Risk assessments (psychosocial stressors, musculoskeletal disorders, fatigue, and drowsiness)
- ✓ Motion analysis
- ✓ Study design (systematic review, qualitative study and experimental study)
- ✓ Python and Matlab programming languages
- ✓ SPSS software

Articles

1. Design and Development of an Ergonomics Discipline Strategic Plan in Iran. A. Mazloumi, A. M. Mosadeghrad, Z. Kazemi, M. Khosravi Danesh, **F. Khanehshenas**, M. S. Ghasemi, et al. *Iran Occupational Health, In press.* (In Persian).
2. Evaluation of driver drowsiness based on respiratory metrics. **F. Khanehshenas**, A. Mazloumi, A. Nahvi, A. Nickabadi, A. Aghamalizadeh and A. Keihani. *Work* 2024 Issue Preprint Pages 1-14.
3. A hybrid approach for driver drowsiness detection utilizing practical data to improve performance system and applicability. **F. Khanehshenas**, A. Mazloumi, A. Nahvi, A. Nickabadi, K. Sadeghniaat, A. Rahimiforoushani, et al. *Work* 2023 Issue Preprint Pages 1-13.
4. Fatigue in transportation operations: a contextual factors survey among Iranian suburban drivers. **F. Khanehshenas**, A. Mazloumi, R. Dabiri and S. N. Adinevand. *Work* 2023 Vol. 75 Issue 4 Pages 1439-1454.
5. Drivers' subjective perceptions of the contextual factors influencing fatigue: A qualitative study of suburban bus drivers in Iran. **F. Khanehshenas**, A. Mazloumi, P. A. Jalaldehi and M. Kaveh. *Work* 2022 Vol. 72 Issue 4 Pages 1481-1491.
6. The effect of auditory stimulation using delta binaural beat for a better sleep and post-sleep mood: A pilot study. R. Dabiri, M. R. Monazzam Esmailpour, M. Salmani Nodoushan, **F. Khaneshenas** and S. A. Zakerian. *Digital Health* 2022 Vol. 8 Pages 20552076221102243.

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7. Psychological effects of COVID-19 on mental health and related factors among workers of a beverage industry in Tehran, Iran. **F. Khanehshenas** and B. Kouhnavard. *International Journal of Occupational Hygiene* 2020 Vol. 12 Issue 1 Pages 10-23. (In Persian).
8. Ergonomics in Laparoscopic Surgery: A Case Study in Hospitals of Tehran University of Medical Sciences, Iran. S. A. Zakerian, S. Tarzi Moghaddam, K. Toulabi, A. Mortezapour Soufiani, **F. Khanehshenas** and S. Mosafarchi. *Journal of Occupational Hygiene Engineering* 2019 Vol. 5 Issue 4 Pages 17-25. (In Persian).
9. The Effect of Biophilic Design Patterns on Employee's Health and Well-being: A Systematic Review. **F. Khanehshenas** and P. Habibi. *Iranian Journal of Ergonomics* 2020 Vol. 7 Issue 4 Pages 1-11. (In Persian).
10. Psychosocial Stressors and Job Performance among Bank Employees: An Integrated Model. T. ALLAHYARI, **F. KHANEHSHENAS** and H. KHALKHALI. *International Journal of Occupational Hygiene* 2017 Vol. 9 Issue 1 Pages 46-51.
11. An investigation of the impact of using latex and nitrile gloves on hand dexterity. T. ALLAHYARI, **F. KHANEHSHENAS** and H. KHALKHALI. *International Journal of Occupational Hygiene* 2015 Vol. 7 Issue 1 Pages 22-26.
12. Comparison of the effect of using latex and nitrile gloves hand dexterity among Iranian population. T. Allahyari, H. Khalkhali and **F. Khanehshenas**. *Journal of safety and health at work*. 2014. (In Persian).
13. Explaining the relationship between psychosocial stress and job performance in the banking industry based on an integrated model. T. ALLAHYARI, **F. KHANEHSHENAS** and H. Khalkhali. 2017.
14. Investigation of the relationship between psychosocial stressors and job performance among bank employees. **F. Khanehshenas** and T. Allahyari. *Iranian Journal of Ergonomics* 2014 Vol. 1 Issue 3 Pages 1-10. (In Persian).

Conference Papers

1. Examining the relationship between psychosocial stressors and job performance among bank employees. The first Biennial National Conference on Ergonomics was held in Hamedan, Iran. 2012. (Poster, in Persian).
2. Comparison of the effects of using latex and nitrile gloves on the hand skills of the Iranian population. The first Biennial National Conference on Ergonomics was held in Hamedan, Iran, in 2012. (Oral, in Persian).
3. Biophilic design in ergonomics and its effects on the health and well-being of employees, The third Biennial Conference on Ergonomics, Tehran, Iran, 2019 (Poster, in Persian).
4. Determining parameters related to driver distraction in a microscopic traffic simulator model. The third international webinar on ergonomics and the fourth biennial conference on ergonomics were held in Shiraz, Iran. 2019. (Poster, in Persian).
5. Examining the psychological effects of the COVID-19 disease among the personnel of a soft drink industry. The 15th Annual Research Conference of medical sciences universities in the east of the country, Tehran, Iran, 2022. (Oral, in Persian).

6. Detection driver drowsiness with the approach of combining contextual and practical data based on Bayesian networks 6th International Reliability and Safety Engineering Conference, Tehran, Iran. 2023. (Oral, in Persian).
7. Calibration of the driver distraction parameter in traffic microsimulation software based on the visual scanning pattern. 2nd International Traffic Safety Conference 2022. Doha, Qatar, March 21–22, 2022. (Oral, in Persian).
8. Brainwave entrainment for better sleep and post-sleep state: A pilot study. The 4th International Iranian Ergonomics Congress and the 5th Biennial Iranian Congress on Ergonomics, 2024. (Poster, in Persian).
9. A Hybrid Approach for Driver Drowsiness Detection Utilizing Practical Data to Improve Performance System and Applicability. The 4th International Iranian Ergonomics Congress and the 5th Biennial Iranian Congress on Ergonomics. 2024. (Poster, in Persian).
10. Investigating the relationship between contextual factors and fatigue among Iranian suburban bus drivers. The 4th International Iranian Ergonomics Congress and the 5th Biennial Iranian Congress on Ergonomics. 2024. (Poster, in Persian).
11. Drivers perceptions and experiences of factors affecting drowsiness: a qualitative study among Iranian suburban bus drivers. The 4th International Iranian Ergonomics Congress and the 5th Biennial Iranian Congress on Ergonomics. 2024. (Poster, in Persian).
12. Evaluation of diver drowsiness based on respiratory metrics. The 4th International Iranian Ergonomics Congress and the 5th Biennial Iranian Congress on Ergonomics. 2024. (Oral, in Persian).

Research Projects

Localization and software development of the set of Key Indicator Methods (KIM) in order to evaluate the physical workload in manufacturing and service industries. *Approval No.30177.*

Investigating the effect of using latex and nitrile gloves on the manual dexterity of the Iranian population. *Approval No.102464.*

Presentation and evaluation of a driver drowsy recognition dynamic model with an approach of contextual and practical multiple variable fusion based on Bayesian Network and Hidden Markov Model. *Approval No.46044.*

Evaluating the ergonomic effectiveness of the smart system for monitoring the sitting of office workers and computer users. *Approval No.62242.*

National collaboration

Development of a Strategic Plan for the Ergonomics Discipline in Iran on the basis of Social Accountability with an Innovative and Entrepreneurship Approach, National Agency for Strategic Research in Medical Education (NASR), 2021-2022.

Thesis Advisor

Localization and software development of the set of Key Indicator Methods (KIM) in order to

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evaluate the physical workload in manufacturing and service industries. *Approval No.30177.*

Development and validation of an ergonomic evaluation checklist for office chairs and ranking them using the Fuzzy Analytical Hierarchy Process (FAHP). *Approval No.67252.*

Experimental Study on Male Driver's Drowsiness Detection based on physiological data (changes in facial temperature and respiratory parameters) using machine learning techniques, *Approval No. 55162, Ongoing.*

Books

Evaluation methods in ergonomics (a review of practical tools in ergonomics). 2023.

Driver Fatigue and Drowsiness: Detection System and Countermeasure.2023.

Ergonomics in the automotive design. 2019.

Patent

Iran Patent; NO; 100044. Declaration number: 13970140003008254.