Iran University of Medical Sciences
Public Health School

Academic and Research Resume of Faculty Members

Personal Information

Full Name: Marzieh Izadi Laybidi

Academic Rank: Assistant professor

Organizational Position: Faculty member

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Field of Specialization: Cognitive ergonomics

Contact Information

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Educational Background

Degree	Field of Study	Specialization	University
Ph.D	Cognitive ergonomics	Ergonomics	Tabriz University of Medical Sciences
M.Sc	Cognitive ergonomics	Ergonomics	Tehran University of Medical Sciences
B.Sc	-	Occupational Health and safety engineering	Kashan University of Medical Sciences

controllers using psychophysiological responses.

MSc Thesis Title: Assessment of mental workload using electroencephalographic signal analysis among air traffic control center controllers.

Teaching Experience

I have been involved in teaching of the following subjects:
Occupational ergonomics, B.Sc. Students
General occupational health, B.Sc. Students
Introduction to the industry, B.Sc. Students
Ergonomic assessment methods, M.Sc. Students
Macroergonomics, M.Sc. Students
Cognitive ergonomics, M.Sc. Students
Human error and systems safety, M.Sc. Students
Research methods, M.Sc. Students
Evaluation methods in ergonomics, M.Sc. Students
Design principles, M.Sc. Students
Anthropometry, M.Sc. Students
Technology and business management in ergonomics, M.Sc. Students

Research Experience

Full paper published in refereed journals

1. Ziaei M, Izadpanah S, Sharafi K, Shangol A, **Izadi Laybidi M**. Prevalence and risk factors of musculoskeletal disorders in inside and outside-city taxi drivers; Andisheh city, 2011. Razi Journal of Medical Sciences. 2014. (In Persian).
2. **Izadi laybidi M**, Mazloumi A, Nasl Saraji J, Gharagozlou F, Azam K. Assessment of mental workload Air Traffic Controllers based on task load factors in Air Traffic Control simulator. Iran Occupational Health. 2016. (In Persian).
3. Mazloumi A, **Izadi laybidi M**, Nasl Saraji J, Gharagozlou F, Jafari A.H, Shirzhiyan Z, Azam K. Shiraz Electronic Medical Journal. 2016.
4. Ziaei M, Ziaei H, Hosseini SY, Gharagozlou F, Keikhamoghaddam AA, **Izadi Laybidi M**, et al. Assessment and virtual redesign of a manual handling workstation by computer-aided three-dimensional interactive application. International Journal of Occupational Safety and Ergonomics. 2017.
5. **Izadi Laybidi M**, Rasoulzadeh Y, Dianat I, Samavati M, Asghari Jafarabadi M, Nazari MA. Cognitive performance and electroencephalographic variations in air traffic controllers under various mental workload and time of day. Physiology & Behavior. 2022.
6. Izadi Laybidi M, Mazloumi A, Nasl Saraji J, Gharagozlou F, Jafari AH, Shirzhiyan Z, Azam K. Investigation of relationship between EEG theta power and mental workload in air traffic control simulation. Journal of Health and Health at Work. 2023. (In Persian).
7. Gadimi H, Garosi E, Izadi Laybidi M, Ghasemi MS. Ergonomics Design and Assessment of an Adjustable Laptop Stand Used in the Typing Task. Medical Journal of the Islamic Republic of Iran. 2023.
8. **Izadi Laybidi M**, Mazloumi A, Saraji J.N, Shirzhiyan Z, Azam K. Investigation of Relationship Between EEG Theta Power and Mental Workload in Air Traffic Control Simulation. Journal of Health and Safety at Work. 2023.
9. Mohammadi M, Kazemi Z, **Izadi Laybidi M**, Ghasemi M.S. Associations Between Occupational Physical Activity, Low Back Pain and Disability Among Operating Room Personnel. Journal of Health and Safety at Work. 2024.
10. Ebrahimi A, Jafarpishe A.S, Vahedi M, **Izadi Laybidi M**, Mohammadi S. Comparison of the Effectiveness of Gamification, Tracking Patterns, and Visual Gauges in Improving Hand Motor Performance Through Biofeedback. Physical Treatments. 2025.
11. Mousavi Kani M, Kazemi Z, **Izadi Laybidi M**, Abolghasemi J, Ghasemi M.S. Psychometric Assessment of the Persian Version of the Structured Multidisciplinary Work Evaluation Tool (SMET) Questionnaire among Nurses. 2025.
12. **Izadi Laybidi M**, Asghari-Jafarabadi M, Maleki-Ghahfarokhi A, Entezarizarch E, Khosravi Danesh M. Translation and Cross-Cultural Adaptation of the Individual Work Performance Questionnaire (IWPQ) into Persian and Assessing its Psychometric Properties. Journal of Health and Safety at Work. 2025.

13. Arefian S, **Izadi Laybidi M**, Vahedi M, Melloh M, Mokhtarinia H.R. Impact of mental and physical workload on work function in office workers with musculoskeletal disorders. BMC Musculoskeletal Disorders. 2025.

Papers Presented in International Conferences

1. Mazloumi A, **Izadi laybidi M**, Nasl Saraji J, Gharagozlou F, Jafari A.H, Shirzhiyan Z, Azam K. (2016) Investigating Mental Workload in Air Traffic Control Using Electroencephalography (EEG) Signals. The 2nd International Iranian Ergonomics Conference and the 2nd Biennial Iranian Conference on Ergonomics, Shiraz, Iran, October 19-21, 2016 **(**Oral presentation).

2. **Izadi Laybidi M**, Nazari MA, Samavati M, Dianat I, Rasoulzadeh Y, Asghari Jafarabadi M. (2021) The effects of mental workload and time of day on cognitive performance and electroencephalographic variations in air traffic controllers. The 3rd International Iranian Ergonomics Webinar and the 4th Biennial Iranian Webinar on Ergonomics, Shiraz, Iran, March 3-4, 2021 **(**Oral presentation).

3. **Izadi Laybidi M**, Nazari MA. (2024) The effects of mental workload and time of day on cognitive performance and electroencephalographic variations in air traffic controllers. The 3rd International Iranian Ergonomics Webinar and the 4th Biennial Iranian Webinar on Ergonomics, Tehran, Iran, March 3-4, 2021 **(**Poster).

Published Books

Izadi Laybidi M, Papi Sh, Saki Z, Khalili F, Designing for Older Adults Principles and Creative Human Factors Approaches, Publisher, Darman Arjmand, Iran, 2023, ISSN: 978-622-93884-0-2

Research projects

1) Design, development, and evaluation of a cognitive assistive tool based on pictorial symbols for neurological function assessment in patients using the FOUR score
2) Design, fabrication, and ergonomic evaluation of a patient transfer belt to assist nurses during patient transfer from bed to wheelchair and vice versa
3) Cultural adaptation and psychometric evaluation of the Assistive Device Assessment Questionnaire among nurses
4) The effect of macro-ergonomic interventions on reducing musculoskeletal disorders and improving job performance among emergency nurses
5) Prediction of mental fatigue in air traffic controllers based on electroencephalography using machine learning algorithms
6) Design and development of a cognitive functional assistive tool for assessing the level of consciousness based on pictorial symbols derived from patients' voluntary and involuntary responses
7) Ergonomic design and evaluation of an ultrasound probe to reduce physical strain in the hand and wrist area
8) Cultural adaptation, validity, and reliability of the Persian version of the Simulator Sickness Questionnaire: A study in driving simulation
9) Investigating the effect of forward collision warning systems on driver performance using a driving simulator
10) Analysis of cognitive performance in air traffic controllers using psychophysiological responses
11) Assessment of visual fatigue and its association with occupational and demographic characteristics among computer users at Kermanshah University of Medical Sciences – 2012

Thesis

1. Design and development of a cognitive functional assistive tool based on pictorial symbols for assessing neurological function in patients using the FOUR score (As advisor)
2. Design, fabrication, and ergonomic evaluation of a patient transfer belt to assist nurses during patient transfer from bed to wheelchair and vice versa (As advisor)
3. The effect of macroergonomic interventions on reducing musculoskeletal disorders and improving job performance among emergency nurses (As advisor)
4. Comparison of the effects of game-based biofeedback, pattern-tracking, and rotary pursuit on improving motor performance of the hand in students at the University of Rehabilitation Sciences and Social Health, Tehran (As advisor)

Technical and Professional Skills

- Ergonomic assessment of physiological (HR ،HRV ،EEG ،EMG)
- Human factors methods (mental workload, mental fatigue, cognitive task analysis)
- Human performance, Cognitive performance assessment (working memory, attention)
- Ergonomic interventions, Ergonomics risk assessment and posture analysis
- Experimental study design
- Data analysis (SPSS and GraphPad Prism program)

Scientific Memberships and Academic Activities

Reviewer of Journals

- WORK: A Journal of Prevention, Assessment & Rehabilitation
- Heliyon
- Iran Occupational Health

Membership in national scientific association

- Member of the National Society of Ergonomics and Human Factors Engineering of Iran since 2022