

## Academic CV

### Narmin Hassanzadeh-Rangi

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#### EDUCATION

**Doctor of Philosophy**, Shahid Beheshti University of Medical Science, Tehran, 2020

- Thesis title, supervisor and research committee: Presenting of a dynamic model for mental workload monitoring and it's verification in a simulator, Prof. Mohamad Javad Jafari, Dr. Farid Zaeri, Dr. Amir H Jafari, Dr. Amir T Payandeh Najafabadi
- Publication 3 papers (ISI) extracted from the thesis
- The first person of comprehensive exam
- Conductor and collaborator of 10 research projects
- Participation in the publication of 23 internationally recognized articles

**Master of Science**, Shahid Beheshti University of Medical Science, Tehran, 2010

- Thesis title and supervisor: Development of an Occupational Cognitive Failure Questionnaire (OCFQ) and survey of its relation with unsafe behaviors and accidents in workplaces, Dr. Taymor Alahyari, Prof. Farid Zayeri, Dr. Mahnaz Saremi, Dr. Yahya Khosravi
- Publication 3 papers (ISI and Scopus) extracted from the thesis
- One of the articles extracted from the dissertation became the most cited and most downloaded article in the Iranian Journal of Occupational Health (Scopus)

**Bachelor of Science**, Iran University of Medical Science, Tehran, 2007

#### RESEARCH INTERESTS / RESEARCH PROFILE

#### RESEARCH EXPERIENCE

**PhD course** (2014-2020), Department occupational health, Shahid Beheshti University of Medical Science, Tehran

- Skills of designing and conducting experimental studies, working with ECG, EEG, EMG and EOG equipment and interpreting heart, muscle and brain waves
- Skills of designing and conducting dynamic modeling studies, and working and interpreting system dynamics software (Vensim)
- Skills of designing and conducting structural equation modeling studies, and working and interpreting LISREL and SmartPLS software
- Survey of heat stress effect on mental workload and its relation with human error among train drivers: a experimental study in simulation environment
- Mental workload assessment and its relation with mental fatigue among urban bus drivers

**MSc course (2008-2010)**, Department of occupational health, Shahid Beheshti University of Medical Science, Tehran

- Skills of designing psychometric studies, and working and interpreting SPSS software
- Trying to design an acoustic room by waste material
- Trying to design a heating and cooling system for a office tower (National Iranian Oil Products Distribution Company)

**Researcher and Research Assistant (2011-present)**, Occupational health research center, Iran University of Medical Sciences, Tehran

- Task and hazard analysis of metro drivers and recommendations to improvement: a qualitative study
- Assessment and analysis of ergonomic risk factors in metro driving job and recommendation for improvement: a mixed method study
- Identifying individual and work-related risk factors of musculoskeletal disorders in South Pars Economic-Energy Zone organization: a quantitative study
- Occupational cognitive failure and its relation with accident and unsafe behavior among urban bus drivers: a qualitative study

**Research Assistant (2013-2014)**, Cancer Research Institute, Tehran University of Medical Sciences, Tehran

- Development and implementation of surveillance system for cancer-related occupational exposures in Iranian oil industry

**Researcher and Research Assistant (2015-2022)**, Research Center for Health, Safety and Environment, Alborz University of Medical Sciences, Karaj

- Development of Entrepreneurship Model of Alborz University of Medical Sciences Using Global Models of Entrepreneurial Universities and National Experiences -a mixed method study
- Investigation of environmental factors affecting of mental workload - A review and meta-analysis Study
- Analysis of the situation of job encounters and related consequences in workshops and industries of the country and research priorities and executive interventions
- Assessment and evaluation of total bioaerosol concentration in selected hospitals in Iran and Alborz Universities of Medical Sciences
- Assessment and evaluation of ergonomic factors among administrative staff in Iran and Alborz Universities of Medical Sciences
- Study of the hazardous communication intervention on safety knowledge and performance among lab staff in Iran and Alborz Universities of Medical Sciences
- Systematic review and meta-analysis of occupational exposure with extremely low frequency (ELF) electromagnetic fields and amyotrophic lateral sclerosis (ALS) incidence
- Systematic review and meta-analysis of cancer incidence and mortality among firefighters

**Student Research Advisor (2015-2022)**, Department of occupational health, Alborz University of Medical Sciences, Karaj

- S. Pezeshk, Assessment of health, safety and environment (HSE) statues in office workplaces in Alborz University of Medical Sciences
- M. Karbeh, Assessment of health, safety and environment (HSE) statues in educational and research workplaces in Alborz University of Medical Sciences

- A, Riazat, Evaluation of exposure to Asbestos among train drivers and passengers of Metro line 5 (Tehran-karaj)

**Student Research supervisor (2021-2022)**, Department of occupational health, Alborz University of Medical Sciences, Karaj

- Study of the scientific orientation and trend of work safety articles published in Iranian specialized scientific research journals during the years 2011 to 2022
- Fire risk assessment and recommendation of control measures in Shahid Rajaei Hospital in Alborz Province
- A study of thematic orientation and distribution of occupational health articles published in Iranian specific scientific research journals during the years 2011-2022
- A study of the orientation and trend of ergonomics articles published in Iranian specialized scientific journals during the years 2011 to 2022
- Survey of mental workload and its effect on personnel performance in emergency medical personnel of Alborz University of Medical Sciences
- Fire risk assessment of Imam Ali hospital using FRAME technique in the context of Python and Swift programming software

**Student thesis adviser (2022)**, Department of occupational health, Shahid Beheshti University of Medical Sciences

- knowledge, attitude and practice towards ergonomics while dental practice among the clinical students of dentistry in Shahid Beheshti University of Medical Sciences in 1401

## **AREAS OF TEACHING EXPERTISE**

- Ergonomics and human factors
- Construction and mining safety
- Chemical and fire safety
- Electrical and machine safety
- Heat stress
- Noise control
- Radiation protection
- Research methodology
- Modeling in occupational health and safety

## **TEACHING EXPERIENCE**

- Safety at workplace 1 (construction and mining safety), Alborz University of Medical Sciences
- Safety at workplace 2 (chemical and fire safety), Alborz University of Medical Sciences
- Safety at workplace 3 (Electrical and machine safety), Alborz University of Medical Sciences
- Radiation protection, Alborz University of Medical Sciences
- Specialized language, Alborz University of Medical Sciences
- Entrepreneurship in health, Alborz University of Medical Sciences

## **GRANTS**

- Task and hazard analysis of metro drivers and recommendations to improvement: a qualitative study
- Health, Safety and Environment (HSE) assessment of neighborhoods in Tehran Municipality: validity and reliability of a new instrument
- Task hazard analysis of high risk jobs in the selected oil and gas storage terminals of National Iranian Oil Products Distribution Company: a qualitative study
- Task hazard analysis of high risk jobs in Azerbaijan Gas Zone Company: a qualitative study
- Assessment and evaluation of occupational harmful agents in a gas refinery (Assaluyeh)
- Assessment and evaluation of ergonomic factors among operative and administrative staff in Pars Oil and Gas Company

## **AWARDS / DISTINCTIONS**

- The author of the most cited and most downloaded article in the Iranian Journal of Occupational Health (Scopus)
- The author of the most cited and most read article in the international Journal of Occupational Safety and Ergonomics (IF=1.6)
- The first person of comprehensive exam

## **PROFESSIONAL MEMBERSHIPS / ORGANIZATIONS**

1. Head of the Center for Satellite Growth, Faculty of Health (2022), Alborz University of Medical Sciences, Karaj
2. Representative of the specialized working group of entrepreneurship and knowledge-based businesses (2022), Alborz University of Medical Science, Karaj
3. Member of Alborz University of Medical Sciences Policy Council (2022), Alborz University of Medical Science, Karaj
4. Mentor and judge of technological ideas of Alborz University of Medical Sciences, (2022)
5. Active member of student research committee (2013-2019), Shahid Beheshti University of Medical Science, Tehran
6. Scientific and executive member (2013-2019), the national student conference of public health holding by Shahid Beheshti University of Medical Science, Tehran
7. Research member (2011-present), Occupational health research center, Iran University of Medical Science, Tehran

## **COMMUNITY INVOLVEMENT / ADMINISTRATIVE ACTIVITY / SERVICE**

1. Senior research expert (2011-2012), Occupational health research center, Iran University of Medical Science, Tehran
2. Occupational health consultant (2010-2012), SAHAND industrial group, Tabriz
3. Occupational health consultant (2009-2011), ZAHRAVI pharmaceutical manufacturing company, Tabriz
4. Occupational health consultant (2009-2011), SHAHID QAZI serum manufacturing company, Tabriz

## PUBLICATIONS / PRESENTATIONS /BOOKS

### PEER-REVIEWED PUBLICATIONS

1. Assessment and monitoring of mental workload in subway train operations using physiological, subjective, and performance measures, MJ Jafari, F Zaeri, AH Jafari, AT Payandeh Najafabadi, S Al-Qaisi, **N Hassanzadeh-Rangi**, Human Factors and Ergonomics in Manufacturing & Service Industries 30 (3), 2020
2. Human-based dynamics of mental workload in complicated systems, MJ Jafari, F Zaeri, AH Jafari, ATP Najafabadi, **N Hassanzadeh-Rangi**, EXCLI journal 18, 501, 2019
3. Mental workload assessment among train drivers using ECG-related indices MJ Jafari, **N Hassanzadeh-Rangi**, Y Khosravi, S Khodakarim, Health and Safety at Work 8 (4), 333-344, 2019
4. Factors affecting unsafe behavior in construction projects: development and validation of a new questionnaire, H Asilian-Mahabadi, Y Khosravi, **N Hassanzadeh-Rangi**, E Hajizadeh, International Journal of Occupational Safety and Ergonomics, 2019
5. A qualitative investigation of factors influencing unsafe work behaviors on construction projects, H Asilian-Mahabadi, Y Khosravi, **N Hassanzadeh-Rangi**, E Hajizadeh, Work 61 (2), 281-293, 2018
6. Mental workload and its relation with fatigue among urban bus drivers, **N Hassanzadeh-Rangi**, Y Khosravi, M Sarami, MJ Jafari, Journal of Occupational Hygiene Engineering 4 (1), 66-74, 2017
7. Assessment and analysis of physical workload in metro driving job and recommendation for improvement, **N Hassanzadeh-Rangi**, Y Khosravi, AA Farshad, H Jalilian, Health and Safety at Work 7 (1), 33-44, 2017
8. Task and hazard analysis of metro drivers and recommendations to improvement, Y Khosravi, **N Hassanzadeh-Rangi**, AA Farshad, Iran Occupational Health 13 (6), 46-57, 2017
9. Workload in Train Driving Job: Affecting Factors and Improvement Recommendations, **N Hassanzadeh-Rangi**, Y Khosravi, AA Farshad, H Jalilian, JOURNAL OF ERGONOMICS 5 (1), 60-72, 2017
10. Inter and intra-rater reliability of a new assessment tool for Health, Safety, and Environment (HSE) in urban districts: A case study in Tehran city, **N Hassanzadeh-Rangi**, Y Khosravi, AA Farshad, R Abedinloo, H Jalilian, Health and Safety at Work 6 (3), 73-90, 2016
11. Content and trend analysis of articles published in a key journal on human factors and ergonomics during 2005-2014, **N Hassanzadeh-Rangi**, Y Khosravi, Iranian Journal of Ergonomics 3 (2), 44-53, 2015
12. Mental workload and its relation with fatigue among urban bus drivers, **N Hassanzadeh-Rangi**, Y Khosravi, M Sarami, MJ Jafari, Occupational Hygiene Engineering 3 (2), 20-33, 2015
13. Why construction workers involve in unsafe behavior? Development and cross-validation of a structural model, Y Khosravi, H Asilian-Mahabadi, **N Hassanzadeh-Rangi**, E Hajizadeh, Iran Occupational Health 12 (1), 2015
14. Why construction workers involve in unsafe behavior: Part B: Scale validity and reliability, Y Khosravi, H Asilian-Mahabadi, MJ Jafari, **N Hassanzadeh-Rangi**, Iran Occupational Health 11 (6), 10-20, 2014

15. Why construction workers involve in unsafe behavior? validity and reliability study of a new instrument, Y Khosravi, H Asilian-Mahabadi, MJ Jafari, **N Hassanzadeh-Rangi**, Iran Occupational Health 11 (6), 2014
16. Health, Safety and Environment (HSE) assessment of neighborhoods: A case study in Tehran Municipality, **N Hassanzadeh-Rangi**, Y Khosravi, AA Farshad, H Jalilian, F Falaki, Iranian Journal of Health, Safety and Environment 1 (4), 166-171, 2014
17. Structural modeling of safety performance in construction industry, Y Khosravi, H Asilian-Mahabadi, E Hajizadeh, **N Hassanzadeh-Rangi**, Iranian journal of public health 43 (8), 1099, 2014
18. Occupational cognitive failures and safety performance in the workplace, T Allahyari, **N Hassanzadeh-Rangi**, H Khalkhali, Y Khosravi, International journal of occupational safety and ergonomics 20 (1), 175-180, 2014
19. Occupational cognitive failure and its relationship with unsafe behaviors and accidents, **N Hassanzadeh-Rangi**, A AsgharFarshad, Y Khosravi, G Zare, International journal of occupational safety and ergonomics 20 (2), 265-271, 2014
20. Factors influencing unsafe behaviors and accidents on construction sites: a review, Y Khosravi, H Asilian-Mahabadi, E Hajizadeh, **N Hassanzadeh-Rangi**, International journal of occupational safety and ergonomics 20 (1), 111-125, 2014
21. Identifying individual and work-related risk factors of musculoskeletal disorders in an industrial organization, **N Hassanzadeh-Rangi**, AA Farshad, M Motamedzade, Y Khosravi, Iranian Journal of Ergonomics 1 (2), 36-48, 2013
22. Modeling the factors affecting unsafe behavior in the construction industry from safety supervisors' perspective, Y Khosravi, H Asilian-Mahabadi, E Hajizadeh, **N Hassanzadeh-Rangi**, Journal of research in health sciences 14 (1), 29-35, 2013
23. The survey of relationship between occupational cognitive failures and safety performance among bus drivers, **N Hassanzadeh-Rangi**, N Farshad, Y Khosravi, PS Gholami, G Zare, Iran Occupational Health 13 (6), 46-57, 2013
24. Development of an Occupational Cognitive Failure Questionnaire (OCFQ): validity and reliability evaluation, **N Hassanzadeh-Rangi**, T Allahyari, Y Khosravi, F Zaeri, M Saremi, Iran Occupational Health 9 (1), 29-40, 2012
25. Development and evaluation of a new questionnaire for rating of cognitive failures at work, T Allahyari, **N Hassanzadeh-Rangi**, Y Khosravi, F Zayeri, International Journal of Occupational Hygiene 3 (1), 6-11, 2011
26. The Study of Implement of HCS Program at Hazardous Chemicals Knowledge and Safety performance in Tehran refinery, s laboratory unit, Y Khosravi, AA Farshad, SH Arghami, MH Taghdisi, MR Gaohari, **N Hassanzadeh-Rangi**, Iran Occupational Health 5 (3), 20-27, 2008

## RESEARCH PROFILE

1. Scopus: h-index=8 , Citation=150  
Research profile on Scopus:
2. Google Scholar: h-index=10 , Citation=388  
Research profile on Google Scholar:

## CONFERENCE PRESENTATIONS AND POSTERS

### CONFERENCE PRESENTATIONS

1. Development and Evaluation of a New Questionnaire for Rating of Cognitive Failures at Work. **N Hassanzadeh-Rangi**, T Allahyari, The 10th International Symposium of Human Factors in Organisational Design and Management.4-6 April 2011, Grahamstown, South Africa.
2. Economic Justification of Occupational Health and Safety Programs, National Health congress, **N Hassanzadeh-Rangi**, Y Khosravi, April, 10-12, Tehran, Iran
3. Integration of Health, Safety and Environment Programs: Why and How? National Health congress, Y Khosravi, **N Hassanzadeh-Rangi**, April, 10-12, Tehran, Iran

### CONFERENCE POSTERS

4. Workload in Train Driving Job: Affecting Factors and Improvement Recommendations, **N Hassanzadeh-Rangi**, Y Khosravi, AA Farshad, H Jalilian, National Conference on Safety and Health at Work, 20-23 March 2017, Rasht, Iran
5. Analyzing Semnan-Damghan travel collision incidents (November 25, 2016), STEP, FTA and ETA methods, **N Hassanzadeh-Rangi**, National Conference on Safety and Health at Work, 20-23 March 2017, Rasht, Iran
6. Assessment and analysis of physical workload in metro driving job and recommendation for improvement, **N Hassanzadeh-Rangi**, Y Khosravi, AA Farshad, H Jalilian, International Conference on Civil Engineering, 15-18 Jan 2017, Tehran, Iran
7. Mental workload and its relation with fatigue among urban bus drivers, **N Hassanzadeh-Rangi**, Y Khosravi, M Sarami, MJ Jafari, International Conference on Civil Engineering, 15-18 Jan 2017, Tehran, Iran
8. The survey of relationship between occupational cognitive failures and safety performance among bus drivers, **N Hassanzadeh-Rangi**, N Farshad, Y Khosravi, PS Gholami, G Zare, International Conference on Civil Engineering, 15-18 Apr 2016, Tehran, Iran
9. Task and hazard analysis of metro drivers and recommendations to improvement, Y Khosravi, **N Hassanzadeh-Rangi**, AA Farshad, International Conference on Civil Engineering, 15-18 April 2016, Shiraz, Iran
10. Prevalence of Musculoskeletal Disorders among Taxi Drivers in Urmia City, **N Hassanzadeh-Rangi**, Conference of Western Students' Health Zones, Kermanshah University of Medical Sciences, March 2003

## BOOKS

1. Behavior-based safety: a focus on civil projects, Y Khosravi, H Asilian-Mahabadi, **N Hassanzadeh-Rangi**, Fadak Stasis, Tehran, 2017
2. How to write an ISI paper, Y Khosravi, **N Hassanzadeh-Rangi**, Fadak Stasis, Tehran, 2017
3. Occupational exposure limits, (fourth author and editor), reference book for master's and doctorate exams, **N Hassanzadeh-Rangi** et al, published by the Ministry of Health, 1400