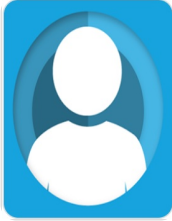




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h-index (Scopus):
3

Citations (Scopus):
73

Educational Records

| # | Degree/Major | University | City | Country | Graduation Date |
|---|-------------------|---------------------------------|----------|--------------------|-----------------|
| 1 | BSc | Sharif University of Technology | Tehran | Iran | 2004 |
| 2 | MSc (Distinction) | University College London (UCL) | London | The United Kingdom | 2005 |
| 3 | PhD | McGill University | Montreal | Canada | 2011 |

Research Interests

| # | Title | Start date |
|---|---|------------|
| 1 | Air pollution (statistical analysis and health impact assessment) | |
| 2 | Experimental techniques in fluid mechanics: acoustic Doppler velocimetry, hot-film anemometry | |
| 3 | Environmental fluid mechanics: the effect of environmental turbulence on the pollution dispersion in forms of jets/plumes | |

Supervised MSc Theses

| # | Thesis title | By | Date |
|----|--|---|----------------|
| 1 | Studying the Effect of the COVID-19 Pandemic Restrictions on Air Quality in Tehran and Assessing the Impact of this Quality change on Health | Seyed Amirhosein Najib & Babak Khorsandi | October 2021 |
| 2 | Biogenic turbulence generated by various fish species | Sana Ahani & Babak Khorsandi | August 2021 |
| 3 | Health impact assessment of long-term exposure to PM2.5, O3, black carbon in Tehran from 2016-2018 and Comparison between AirQ+ and BenMAP-CE in estimating the health benefits | Asma Mirzaei Abass Abadi & Babak Khorsandi | July 2021 |
| 4 | Effect of a coflowing stream on two parallel round jets | Neda Beyrami & Babak Khorsandi | July 2021 |
| 5 | Effect of initial conditions on the dynamics and mixing of turbulent jets | Pourya Nejati Pour & Babak Khorsandi | September 2020 |
| 6 | Effect of oscillating-grid turbulence on the oil distribution in depth | Mohammad Ghiasvand & Babak Khorsandi | August 2020 |
| 7 | Effect of a coflowing stream on the dynamics and mixing of a turbulent wall jet | Mohammad Kazemi Balgehshiri & Babak Khorsandi | February 2020 |
| 8 | Environmental impact assessment and numerical modeling of brine discharge from desalination plants in the Persian Gulf | Vahid Babaeinezhad & Babak Khorsandi | February 2020 |
| 9 | Statistical analysis and health impact assessment of black carbon and ozone in recent years in tehran | Kiarash Farzad & Babak Khorsandi | February 2020 |
| 10 | Removal of a Selected Pollutant from Air Stream Using Non-Thermal Plasma and Adsorbent Hybrid Process | Hamidreza Safari Varyani & Babak Khorsandi | June 2019 |
| 11 | Effect of Air Pollution on Traffic Accidents | Maryam Ahmadi & Babak Khorsandi | March 2019 |
| 12 | Effect of coflow turbulence on the dynamics and mixing of a turbulent axisymmetric jet | Masoud Moeini & Babak Khorsandi | February 2019 |
| 13 | Modeling scenarios to reduce air pollution emission caused by large scale industries with an approach to sustainable development goals (SDGs) and national commitment to COP21 Case Study: Tehran region | Amirhosein Abdorrezayi & Babak Khorsandi | February 2018 |

Journal Papers

Portal Records

- Vahid Babaeinezhad, Babak Khorsandi, "Influence of ambient flow on the behavior of dense effluent discharged into the water environment", Amirkabir Journal of Civil Engineering, November 2021 Vol. 53, Num. 9, Page 1-25, November 2021,
- Vahid Babaeinezhad, Babak Khorsandi, "Studying the Best Method for Saline Wastewater Discharge: A Case Study of One of Assaluyeh Desalination Plants", Journal of Hydraulics, October 2021 Vol. 16, Num. 3, Page 1-15, October 2021,
- Vahid Babaeinezhad, Babak Khorsandi, "Validation of CORMIX and CorJet models in dense effluents released with a 60-degree angle from multi-port dischargers", Journal of Hydraulics, August 2021 Vol. 16, Num. 2, Page 1-13, August 2021,

- 4 Babak Khorsandi, Kiarash Farzad, Hannaneh Tahriri Vasighi, Reza Maknoon, "Association between short-term exposure to air pollution and COVID-19 hospital admission/mortality during warm seasons", ENVIRONMENTAL MONITORING AND ASSESSMENT, June 2021 Vol. 193, Num. 426, Page 1-6, June 2021,
- 5 Farzin Homayounfar, Babak Khorsandi, "Application of Post-Processing Methods on the Velocity Statistics Measured at Different Sampling Frequencies Using Acoustic Doppler Velocimeter", Journal of Hydraulics, June 2021 Vol. 16, Num. 1, Page 37-51, June 2021,
- 6 Asma Mirzaei Abass Abadi, Hannaneh Tahriri Vasighi, Babak Khorsandi, "Comparison between AirQ+ and BenMAP-CE in estimating the health benefits of PM2.5 reduction", Air Quality Atmosphere and Health, March 2021 Vol. 0, Num. 0, Page 1-9, March 2021,
- 7 Kiarash Farzad, Babak Khorsandi, Maziar Khorsandi, Omar Bouamra, Reza Maknoon, "Estimating short-term mortality benefits associated with a reduction in tropospheric ozone", ATMOSPHERIC ENVIRONMENT, March 2021 Vol. 252, Num. 118342, Page 1-8, March 2021,
- 8 Mohammad Kazemi Balgehshiri, Babak Khorsandi, Laurent Mydlarski, "Effect of acoustic Doppler velocimeter sampling volume size on measurements of turbulence", JOURNAL OF ATMOSPHERIC AND OCEANIC TECHNOLOGY, December 2020 Vol. 1, Num. 1, Page 1-13, December 2020,
- 9 Maryam Ahmadi, Babak Khorsandi, Mahmoud Mesbah Namini, "The effect of air pollution on drivers' safety performance", ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH, November 2020 Vol. 1, Num. 1, Page 1-14, November 2020,
- 10 Masoud Moeini, Babak Khorsandi, Laurent Mydlarski, "Effect of Coflow Turbulence on the Dynamics and Mixing of a Nonbuoyant Turbulent Jet", JOURNAL OF HYDRAULIC ENGINEERING-ASCE, October 2020 Vol. 147, Num. 1, Page 1-13, October 2020,
- 11 Kiarash Farzad, Babak Khorsandi, Maziar Khorsandi, Omar Bouamra, Reza Maknoon, "A study of cardiorespiratory related mortality as a result of exposure to black carbon", SCIENCE OF THE TOTAL ENVIRONMENT, April 2020 Vol. 725, Num. 138422, Page 1-10, April 2020,
- 12 Masoud Moeini, Babak Khorsandi, Laurent Mydlarski, "Effect of Acoustic Doppler Velocimetry Sampling Frequency on Statistical Measurements of Turbulent Axisymmetric Jets", JOURNAL OF HYDRAULIC ENGINEERING-ASCE, April 2020 Vol. 146, Num. 7, Page 1-17, April 2020,

Other Records

- 1 Khorsandi, B., Gaskin, S.J., Mydlarski, L., "Effect of background turbulence on the dynamics and mixing of an axisymmetric turbulent jet", Journal of Fluid Mechanics, 2013 Vol. 736, Num. , Page 250-286, 2013,
- 2 Khorsandi, B., Mydlarski, L., Gaskin, S.J., "Noise in turbulence measurements using acoustic Doppler velocimetry", Journal of Hydraulic Engineering-ASCE, 2012 Vol. 138, Num. 10, Page 29-838, 2012,

Conference Papers

Portal Records

- 1 Atefeh Soltaniye, Neda Beyrami, Farzin Homayounfar, Babak Khorsandi, "The effect of velocity range of acoustic Doppler velocimeter on the accuracy of measurements ", The 19th Iranian Hydraulic Conference, February 2021
- 2 Farzin Homayounfar, Atefeh Soltaniye, Babak Khorsandi, "Experimental investigation of the dynamics of two parallel axisymmetric turbulent jets ", The 19th Iranian Hydraulic Conference, February 2021
- 3 Sana Ahani, Babak Khorsandi, "Laboratory study of biogenic turbulence generated by Koi fish at various abundances ", The 19th Iranian Hydraulic Conference, February 2021
- 4 Neda Beyrami, Pourya Nejati Pour, Mohammad Kazemi Balgehshiri, Babak Khorsandi, "An experimental study of the dynamics of a turbulent circular wall jet ", 12th National Congress of Civil Engineering, May 2020
- 5 Seyed Amirhosein Najib, Babak Khorsandi, Taghi Ebadi, "Study of pyrolysis of widely used plastic wastes with a focus on liquid product production ", 12th National Congress on Civil Engineering, May 2020

- 6 Pourya Nejati Pour, Babak Khorsandi, "The effect of initial conditions on the dynamics of two circular and square turbulent jets issued into a quiescent background ", 12th National Congress of Civil Engineering, May 2020
- 7 Vahid Babaeinezhad, Babak Khorsandi, "Influence of ambient flow on dilution rate of negatively buoyant jets ", The 18th Iranian National Hydraulic Conference, February 2020
- 8 Mohammad Kazemi Balgehshiri, Pourya Nejati Pour, Babak Khorsandi, "Effect of sampling volume size of acoustic Doppler velocimeters (ADV's) on measurements ", The 18th Iranian National Hydraulic Conference, February 2020
- 9 Vahid Babaeinezhad, Babak Khorsandi, Reza Khodadadi, "Effect of the discharge angle and height on the dilution rate of dense jets in a quiescent environment ", The 18th Iranian National Hydraulic Conference, February 2020
- 10 Mohammadmahdi Miraj, Ahmad Taheri, Babak Khorsandi, "THE CORRELATION BETWEEN BLACK CARBON AEROSOL AND CO, AND TROPOSPHERIC OZONE IN TEHRAN ", The 1st International Conference on Application of Air Quality in Science and Engineering Purposes, February 2020
- 11 Negah Soleimani, Ahmad Taheri, Babak Khorsandi, "PREDICTING BENZENE CONCENTRATION LEVELS FROM STATISTICAL DATA OF OTHER AIR POLLUTANTS BY MULTIPLE REGRESSION ANALYSIS ", The 1st International Conference on Application of Air Quality in Science and Engineering Purposes, February 2020
- 12 Pedram Akbari Ghuchani, Ahmad Taheri, Babak Khorsandi, "EVALUATION OF THE COLD START PHENOMENA AND ITS EFFECT ON AIR QUALITY BASED ON MONITORED DATA IN TEHRAN ", The 1st International Conference on Application of Air Quality in Science and Engineering Purposes, February 2020
- 13 Amir Mohammad Eslami, Ahmad Taheri, Babak Khorsandi, "ESTIMATION OF SECONDARY AEROSOLS FORMATION THROUGH PHOTOCHEMICAL REACTIONS, CASE STUDY: TEHRAN ", The 1st International Conference on Application of Air Quality in Science and Engineering Purposes, February 2020
- 14 Asma Mirzaei Abass Abadi, Babak Khorsandi, "Comparison of health impact estimates of PM2.5 using AirQ+ and BenMap software in Tehran during 2016-2018 ", The 8th National Conference on Air and Noise Pollution Management, February 2020
- 15 Aminreza Omranian Khorasani, Shahab Dabirinejad, Zahra Kian, Babak Khorsandi, Meeghat Habibian, "Contribution of Pollutant Sources to CO2 Emission in Karaj ", The 8th National Conference on Air and Noise Pollution Management, February 2020
- 16 Mohammad Hossein Yazdani Kachouei, Babak Khorsandi, "Effects of ozone on respiratory mortalities in Tehran ", The 8th National Conference on Air and Noise Pollution Management, February 2020
- 17 Shahab Dabirinejad, Amin Moeinadini, Meeghat Habibian, Babak Khorsandi, "Evaluation of Iran Railway Electrification Impacts on Air Pollution; Case study: Tehran-Tabriz Railway ", The 8th National Conference on Air and Noise Pollution Management, February 2020
- 18 Babak Khorsandi, Mahdiyeh Kalhori, Mohammad Ghiasvand, "Analyzing Irans water label and comparing it with leading countries standards ", The 2nd national conference on water consumption management loss reduction and reuse, December 2019
- 19 Masoud Moeini, Mohammad Kazemi Balgehshiri, Babak Khorsandi, Laurent Mydlarski, "A LABORATORY STUDY OF THE EFFECT OF ACOUSTIC DOPPLER VELOCIMETER SAMPLING FREQUENCY AND SAMPLING VOLUME ON MEASUREMENTS ", The 24th Hydrotechnical Conference, CSCE (Canadian Society for Civil Engineering), 2019, June 2019
- 20 Mohammad Kazemi Balgehshiri, Masoud Moeini, Babak Khorsandi, "The accuracy of acoustic Doppler velocimeter measurements in a turbulent jet and the application of spike and noise removal post-processing methods ", 11th National Congress on Civil Engineering, May 2019
- 21 Kiarash Farzad, Ahmad Taheri, Babak Khorsandi, "Health Impact Assessment Associated with Exposure to Black Carbon Using BenMAP in Tehran during the Second Half of 1396 and the First Half of 1397 ", The 7th National Conference on Air and Noise Pollution, January 2019
- 22 Maryam Ahmadi, Babak Khorsandi, Mahmoud Mesbah Namini, "A comprehensive review on the effects of air pollution on human performance ", International conference on society and environment, September 2018
- 23 Amirhosein Abdorrezayi, Babak Khorsandi, Reza Maknoon, "Modeling Scenarios to Reduce Air Pollution Emission Caused by Power Plants in Tehran region ", 11th International Congress on Civil Engineering, May 2018

- 24 Masoud Moeini, Babak Khorsandi, "Effect of External Forcing on the Self-Similarity of Turbulent Jets ", The 16th Iranian Hydraulic Conference, September 2017
- 25 Amirhosein Abdorrezayi, Reza Maknoon, Babak Khorsandi, "Air Pollution Dispersion Models: History, Mathematical Foundations, Software, and How to Choose an Appropriate Model ", The 10th National Congress on Civil Engineering, April 2017
- 26 Babak Khorsandi, "Accuracy of Acoustic Doppler Velocimetry in Turbulence Measurements ", The 15th Hydraulic Conference, December 2016





Professional Memberships

| # | Professional memberships | Explanations |
|---|---|--------------|
| 1 | Association for the Sciences of Limnology and Oceanography (ASLO) | |

Journal Referee

| # | Magazine Title | Date of Cooperation & Explanations |
|---|--|------------------------------------|
| 1 | Fluid Dynamics Research | |
| 2 | Flow Measurement and Instrumentation | |
| 3 | ISH-Journal of Hydraulic Engineering | |
| 4 | Iranian Journal of Science and Technology, Transactions of Civil Engineering | |
| 5 | AUT Journal of Civil Engineering | |
| 6 | Environment and Water Engineering | |

Taught Courses

| # | Course title | Description | Headlines | Date |
|---|---|--|---|-------------|
| 1 | Principles of Air Pollution Engineering | In this course principles of air pollution, its sources and effects, control mechanisms and technologies, and pollution dispersion modeling will be presented. |  | Fall 2021 |
| 2 | Fluid Mechanics | This course aims to provide an introduction to the fundamentals of fluid mechanics, beginning with the fluid statics followed by the dynamics of fluid flow including internal and external flows. The course applies the theories taught to practical pro |  | Fall 2021 |
| 3 | Fluid Mechanics | This course aims to provide an introduction to the fundamentals of fluid mechanics, beginning with the fluid statics followed by the dynamics of fluid flow including internal and external flows. The course applies the theories taught to practical pro |  | Spring 2021 |
| 4 | Fluid Mechanics | This course aims to provide an introduction to the fundamentals of fluid mechanics, beginning with the fluid statics followed by the dynamics of fluid flow including internal and external flows. The course applies the theories taught to practical pro |  | Fall 2020 |

5 Principles of Air Pollution Engineering In this course principles of air pollution, its sources and effects, control mechanisms and technologies, and pollution dispersion modeling will be presented.



Fall
2020