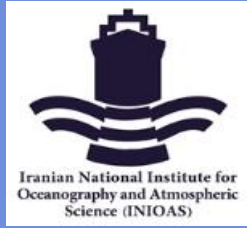


## Curriculum Vitae

**Dr. Fatemeh Hajivalie**



**Positions: head of research and scientific cooperation office**

**Assistant Professor in Coastal Engineering**

**E-mail: hajivalie@inio.ac.ir**



### Academic Background

- Ph.D in Engineering (Civil Eng.), Iran University of Science and Technology, Department of Civil Engineering, 2005-2011
- M.Sc in Engineering (Civil Eng.), K.N. Toosi University of Technology, Department of Civil Engineering, 2003-2005
- B.Sc in Engineering (Civil Eng.), Iran University of Science and Technology, Department of Civil Engineering 1999-2003

### Positions & Work Experiences & Memberships

- Academic Staff, Iranian National Institute for Oceanography (INIO), Apr. 2011- present
- Consultant engineer, Ghods-Niroo consulting engineers, Apr. 2004- Sept. 2005
- Positions: Head of Research and Scientific Cooperation office

### Teaching Experiences

- Coastal Engineering, Iran University of Science and Technology (graduated course, joint teaching).
- Advanced Hydrodynamics, Iranian National Institute for Oceanography and Atmospheric Sciences (PhD course, joint teaching).
- Integrated Coastal Zone Management (ICZM), Iran University of Science and Technology (graduated course).
- Coastal Engineering, Islamic Azad University, Science and Research Branch (graduated course).
- Port design, Iran University of Science and Technology (graduated course).
- Coastal Engineering, Islamic Azad University, Science and Research Branch (graduated course).
- Research technique, Iranian National institute for Oceanography (PhD Course).
- Coastal Engineering, Islamic Azad University, Science and Research Branch (graduated course).
- Open Channel Hydraulic, Iran University of Science and Technology (joint teaching).
- Coastal Engineering, Iran University of Science and Technology (graduated course, joint teaching).
- Teaching assistant, 'Coastal Engineering', Amir Kabir University of Technology (graduated course).
- Fluid mechanic, Science and Culture University, Tehran
- Laboratory of advanced concrete technology, Shahid Rajaiee University, Tehran
- Teaching assistant, 'Open channel hydraulic', Iran university of Science and technology, Tehran.

- Introduction of construction material, Shahid Rajaiee University, Tehran.
- Fluid mechanic, Shahid Rajaiee University, Tehran.
- Laboratory of advanced concrete technology, Shahid Rajaiee University, Tehran
- Teaching assistant, 'Open channel hydraulic', Iran university of Science and technology, Tehran.
- Introduction of construction material, Shahid Rajaiee University, Tehran.
- Laboratory of advanced concrete technology, Shahid Rajaiee University, Tehran
- Teaching assistant, 'Open channel hydraulic', Iran university of Science and Technology, Tehran.
- Introduction of construction material, Shahid Rajaiee University, Tehran.
- Laboratory of construction material, Shahid Rajaiee University, Tehran.
- Teaching assistant, 'Open channel hydraulic', Iran university of Science and Technology, Tehran.

## Research Activities

### Research Interest

- Numerical and experimental modeling of scour around marine structures
- Two-phase modeling of sediment transport
- Hydrodynamics of wave-structure interaction
- Coastal morphodynamic
- Coastal protection and beach nourishment methods
- Nearshore wave-current interaction
- Coastal environmental issues
- Ocean renewable energy

### Full Papers

- Yeganeh-Bakhtiary, A., Houshang, H., **Hajivalie, F.**, Abolfathi, S., (2016): A Numerical Study on the Hydrodynamics of Standing Waves in front of Caisson Breakwaters by a WCSPH Model. Accepted in *Coastal Engineering Journal*. <http://www.worldscientific.com/doi/abs/10.1142/S057856341750005X>
- **Hajivalie, F.**, (2016): Study of Freak wave occurrence possibility in Iran South-East shoreline. ICETA Fall 2016 Proceeding, Seoul, Korea, pp. 21-28.
- **Hajivalie, F.**, Arabzadeh, A., (2016): Numerical modeling of Cyclone Gonu waves crash on Ramin port breakwaters. ICOPMAS 2016 Proceeding, Tehran, Iran, pp. 27-28.
- **Hajivalie, F.**, Yeganeh-Bakhtiary, A. and Bricker, J.D., (2015): Numerical study of submerged vertical breakwater dimension effect on the wave hydrodynamics and vortex generation. *Coastal Engineering Journal*, Vol. 57, 1550009. [21 pages], <http://www.worldscientific.com/doi/abs/10.1142/S0578563415500096?src=recsys>.
- Yeganeh-Bakhtiary, A., Pourzangbar, A., **Hajivalie, F.**, (2015): Genetic Programming to Predict Scour Depth at Coastal Structures, *Journal of Civil and Environmental Engineering*, 45(1), pp. 115-122, (in Persian).
- **Hajivalie, F.**, (2014): Two-Phase modeling of wave induced scour around the vertical submerged breakwaters, Proceeding of *ICOPMAS 2014*, pp. 533-536.
- **Hajivalie, F.**, Jafar Khoshkholgh, A. & Mazaheri, S. (2014): Three dimensional modeling of Caspian Sea currents using FVCOM model. Proceeding of *ICHE 2014*, Hamburg, Germany, pp. 425-430.
- Pourzangbar, A., Yeganeh-Bakhtiary, A., Ghorbani, M.A., **Hajivalie, F.**, (2013): Prediction of maximum scour depth beneath seawalls using ANN. *7<sup>th</sup> National Conference of Civil Engineering*, Zahedan, in Persian.

- Yeganeh-Bakhtiary, A., Koohestani, K., **Hajivalie, F.**, (2014): Prediction of longshore currents in storm using M5'. *15<sup>th</sup> Marin Industrial Conference*, Kish, in Persian.
- Kamranzad, B., Mazaheri, S., **Hajivalie, F.**, (2013): Modification of 32 years ECMWF in field using QuikScat data for wave hindcasting in Iranian Seas. *Journal of coastal Research*. SI 65, pp. 344-349.
- **Hajivalie, F.**, Yeganeh-Bakhtiary, A., (2012): Two-phase flow model for scouring in front of a vertical impermeable submerged breakwater. Book of abstracts, *IAHR-APD Conference*, pp.148-149.
- **Hajivalie, F.**, Yeganeh Bakhtiary, A., Houshanghi, H., Gotoh, H. (2012): Euler-Lagrange Model for Scour in front of Vertical Breakwater, *Applied Ocean Research*, 34: 96– 106. <http://dx.doi.org/10.1016/j.apor.2011.09.006>.
- **Fatemeh Hajivalie**, PhD Thesis in Persian (2011): Two phase flow simulation for scouring in front of caisson breakwaters using Euler-Lagrangian coupling method. Iran University of Science and Technology.
- **Hajivalie, F.**, Yeganeh Bakhtiary, A. (2011): Numerical simulation of the interaction of a broken wave and a vertical breakwater. *International Journal of Civil Engineering*, 9(1): 71-79. [http://ijce.iust.ac.ir/browse.php?a\\_code=A-10-127-1&slc\\_lang=en&sid=1](http://ijce.iust.ac.ir/browse.php?a_code=A-10-127-1&slc_lang=en&sid=1).
- Tahersima, M., Yeganeh Bakhtiary, A., **Hajivalie, F.**, (2011): Scour pattern in front of vertical breakwater with wave overtopping. *Journal of coastal Research*, SI 64, pp. 598-602.
- Akbarpour Jannat, M.R., A., **Hajivalie, F.** and Chegini, V., (2011): Three-dimensional effects of wave groups in shear waves. *Journal of coastal Research*, SI 64, pp. 961-965.
- Yeganeh-Bakhtiary, A., **Hajivalie, F.** and Hashemi-Javan, A., 2010. Steady streaming and flow turbulence in front of vertical breakwater with wave overtopping. *Applied Ocean Research*, 32(1): 91-102, <http://dx.doi.org/10.1016/j.apor.2010.03.002>.
- **Hajivalie, F.** and Yeganeh-Bakhtiary, A., 2009. Numerical study of breakwater steepness effect on the hydrodynamics of standing waves and steady streaming. *Journal of Coastal Research*, SI 56: 514-518.
- **Hajivalie, F.**, Yeganeh-Bakhtiary, A., Gotoh, H. (2008): A comparison between standing wave pattern in front of vertical breakwater with horizontal and slope bed. *ICOPMAS 2008*, book of extended abstracts, 10205-en.
- **Hajivalie, F.**, Yeganeh-Bakhtiary, A., Gotoh, H. (2008): Two-phase flow simulation on tidal currents induced local scouring in front of vertical breakwater, *Proceeding of ICHE 2008*, pp. 1730-1736.
- **Hajivalie, F.**, Yeganeh Bakhtiary, A., Hashemi Javan, A., (2008): Simulation of wave standing waves in front of a vertical breakwater. *7<sup>th</sup> National Conference of Civil Engineering*. Tehran, Iran.
- **Hajivalie, F.**, Yeganeh Bakhtiary, A., Hashemi Javan, A., (2007): Numerical Study of Vertical Breakwater Influence on the Breaking Wave, *Proceeding of VF-2007 on CD*, Paper (VF-30).
- Mehran, A., Yeganeh Bakhtiary, A. and **Hajivalie, F.**, (2007): 3-D Numerical Simulation of a Topographic Gradient on Coastal Current. *Proceeding of VF-2007 Conference*, Fukuoka, Japan.

- **Hajivalie, F.**, Yeganeh Bakhtiary, A., Valipour, R., (2006): Comparison of numerical based and analytical based model of sediment transport and shoreline change in Chabahar harbor. *ICOPMAS 2006*, Book of abstracts, Tehran, Iran.
- Yeganeh Bakhtiary, A., Valipour, R., **Hajivalie, F.**, Mohammadi, M. (2006): Sediment Transport Assessment in Chabahar Harbor North-East of Oman Sea. *First international conference of coastal zone management in the Middle East*. Dubai, U.A.E.
- **Hajivalie, F.**, Soltanpour, M. (2006): Beris Fishing Port, Interfering in the Equilibrium Shape of a Bay. Proceeding of *ICCE 2006*, pp. 3843-3850.
- **Hajivalie, F.**, M. Soltanpour (2004): The study of breakwater construction on Beris bay shoreline, (in Persian), *ICOPMAS 2004*, Tehran, Iran.
- **Fatemeh Hajivalie**, Master Thesis in Persian (2004): The Study of Crenulate shaped bays deformation- case study of Beris fishing port. Kajej Nasir University of Technology.

## Projects

### 2016- Continues

Sediment transport and erosion/ deposition regime in Chabahar bay

### 2013- 2015

Numerical study of high wave run up and overtopping influence on coastal structures in the coastal hazard point of view - Phase one: primary studies, (INIOAS)

### 2013-2014

Two-phase modeling of wave induced scour around the vertical submerged breakwaters, (INIOAS)

### 2013-2014

Oil spill containment methods in the world, (INIOAS),\_project for *Khazar Exploration and production Company* (KEPCO).

### 2013

Numerical modeling of water circulation in the Caspian Sea (using FVCOM), (INIOAS),\_project for *Khazar Exploration and production Company* (KEPCO).

### 2012- 2013

Estimation of the effect of relative submergence depth and Keulegan-Carpenter number on the vortex formation, around the vertical submerged breakwaters, (INIOAS)

### 2011-2012

Preparing the Wave Atlas of the Persian Gulf, the Gulf of Oman and the Caspian Sea, (INIOAS)

### 2009-2010

Combined model for near-shore wave and current, (INIOAS)

### May-Nov. 2008

Numerical modeling of scour in front of vertical breakwater, Laboratory of Hitoshi Gotoh, Kyoto University