

**Prof. Hassan Ghassemi**  
(Updated in April 2017)

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**Information Websites:**

[https://scholar.google.com/citations?hl=en&user=TSB3NsoAAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=TSB3NsoAAAAJ&view_op=list_works&sortby=pubdate)

<http://www.hindawi.com/23813842/>

[https://www.researchgate.net/profile/Hassan\\_Ghassemi](https://www.researchgate.net/profile/Hassan_Ghassemi)

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**Member of Editorial Board:**

1. Int. J. Marine Tech., <http://www.ijmt.ir/>
2. Polish Maritime Research, <http://www.bg.pg.gda.pl/pmr/pmr.php>
3. Int. J. Naval Arch Ocean Eng <http://www.sciencedirect.com/science/journal/20926782>
4. J. Ocean, Mech. Aerospace, <http://isomase.org/JOMAs3.php>
5. Amer. J. of Mech. Eng., <http://www.sciepub.com/journal/AJME/editors>
6. J Mari Univ. Szczecin <http://scientific-journals.eu/>
7. J. Mar Sci App, <http://www.springer.com/engineering/civil+engineering/journal/11804>
8. J. of Mechanics <http://journals.cambridge.org/action/displayJournal?jid=JOM>
9. Ocean Eng. <http://www.journals.elsevier.com/ocean-engineering/>

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**Academic qualification:**

- BSc of Mechanical Engineering, Sharif University of Technology, Tehran, Iran, 1984-88.
- MSc of Ocean Engineering, Gdansk University of Technology, Poland, 1991-93.
- PhD of Ocean Engineering, Yokohama National University, Japan, 1993-96.
- Researcher at IHI, Japan, 1996-98.
- Post-doctoral, Memorial University of Newfoundland, St. John's, NFLD, Canada, 1998-00.
- Assistant Professor, Amirkabir University of Technology, 2000-07,
- Associate Professor, Amirkabir University of Technology, 2008-14,
- Professor, Amirkabir University of Technology, 2015- date

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**Deputy affairs:**

- Educational affairs, 2004-06,
- Financial affairs, 2006-08,
- Research affairs, 2008-2012,

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**Research interest:**

- Advance Hydrodynamics,
- Propulsions and Propeller Theory,

- Ship Resistance,
- Modern Marine Vehicles,
- Renewable Energy,
- Cavitation Phenomena,
- Numerical Methods (BEM, CFD)
- Partial Differential Equations,

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## Lectured courses:

### Under-graduate:

- Ship Knowledge,
- Ship Hydrostatics,
- Ship Hydrodynamics (I, II)
- Fluid Mechanics (I, II),
- Vibration Theory,
- High-Speed Marine Vehicles,

### Post-graduate:

- Marine Propulsor Design,
- Boundary Element Method (BEM),
- Computational Fluid Dynamics (CFD)
- Advanced Marine Hydrodynamics,
- Dynamic of Marine Structures,
- Aero-Hydrodynamics,
- Marine Technology Management,

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## Published Books:

- [1]. Nano-Technology in Marine Industries, 2017, Published by Amirkabir Univ., 250 pages,  
۱- نانوفناوری در صنایع دریایی، ۱۳۹۶، انتشارات دانشگاه امیرکبیر، ۲۵۰ صفحه (قاسمی-نوروزی) تحت داوری
- [2]. Engineering Vibration, Published by Nowshahr Maritime University, 500 pages,  
۲- ارتعاشات مهندسی، ۱۳۹۵، انتشارات دانشگاه دریایی نوشهر ۵۰۰ صفحه (قاسمی-فیروزی)
- [3]. Hydrodynamic of high speed craft, Published by Rashedin publication,  
۳- هیدرودینامیک شناورهای تندرو (۲ جلدی) ۱۳۹۵ انتشارات راشدین (قاسمی-اسماعیلیان)
- [4]. Marine Propulsor, Theory and Design, 2016, Published by Amirkabir Univ., 600 pages,  
۴- تنوری و طراحی پیشرانه های دریایی، ۱۳۹۵، انتشارات دانشگاه امیرکبیر، ۶۰۰ صفحه (قاسمی-اسماعیلیان- سلیمانی)
- [5]. Boundary Element Method, 2016, Published by Amirkabir Univ., 450 pages,  
۵- روش المان مرزی، ۱۳۹۵، انتشارات دانشگاه امیرکبیر، ۴۵۰ صفحه (قاسمی-بختیاری)
- [3]. Underwater Robots, 2015, Published by Rashedin publication, 550 pages,  
۶- روباتهای زیرسطحی، ۱۳۹۴، انتشارات راشدین، ۵۵۰ صفحه (قاسمی-کمرلویی-ابطحی)
- [4]. Ship Design, 2014, Published by Rashedin publication, 400 pages,  
۷- طراحی کشتی، ۱۳۹۳، انتشارات راشدین، ۴۰۰ صفحه (قاسمی-اشرفی-امیریان)

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## Supervisor of PhD Graduated students:

- Dr. Ahmad Reza Kohansal,
- Dr. Iman Farahbakhsh,
- Dr. Reza Shamsi,

- Dr. Morteza Ghassabzadeh,
- Dr. Ehsan Yari,
- Dr. Mohsen Khosravi,

**Present PhD students:**

Dehghanian, Safaei, Firouzi, Zakerdoost, Bakhtiari, Nowruzi, Mahmoodi,

**Supervisor of MSc Graduated students:**

More than 80 students,

**Supervisor of Under-Graduated students:**

More than 120 students,

**ISI Journal papers:**

- [1]. Hassan Zakerdoost, **H. Ghassemi**, Mehdi Iranmanesh, Solving steady state convection-diffusion-reaction using DRBEM, *Advances in Applied Mathematics and Mechanics*, 2017, 9 (3), 680-697..
- [2]. H Nowruzi, **H. Ghassemi**, E Amini, I Sohrabi-asl, Prediction of impinging spray penetration and cone angle under different injection and ambient conditions by means of CFD and ANNs, *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 1-18.
- [3]. MM Shora, **H. Ghassemi**, H Nowruzi, Using computational fluid dynamic and artificial neural networks to predict the performance and cavitation volume of a propeller under different geometrical and physical characteristics, *Journal of Marine Engineering & Technology*, 2017, 1-26.
- [4]. H Nowruzi, **H. Ghassemi**, M Ghiasi, Performance predicting of 2D and 3D submerged hydrofoils using CFD and ANNs, *Journal of Marine Science and Technology*, 2017, 1-24.
- [5]. M Motallebi-Nejad, M Bakhtiari, **H Ghassemi**, M Fadavie, Numerical analysis of ducted propeller and pumpjet propulsion system using periodic computational domain, *Journal of Marine Science and Technology*, 1-15.
- [6]. R Shamsi, **H. Ghassemi**, M Iranmanesh, H, A Comparison of the BEM and RANS Calculations for the hydrodynamic performance of the PODS, *Mechanics & Industry* 2017, 18 (2).
- [7]. **H. Ghassemi**, H Zakerdoost, Ship hull-propeller system optimization based on the multi-objective evolutionary algorithm, *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Eng. Sci.*, 2017, 231(1), 175-192.
- [8]. Reza Shamsi, **Hassan Ghassemi**, Determining the Hydrodynamic Loads of the Marine Propeller Forces in Oblique Flow and Off-Design Condition, *Iranian Journal of Science and Technology, Transaction of Mechanical Eng*, 2016.
- [9]. Hashem Nowruzi, **Hassan Ghassemi**, Using artificial neural network to predict velocity of sound in liquid water as a function of ambient temperature, electrical and magnetic fields, *Journal of Ocean Engineering and Science*, 1(3), (2016).
- [10]. Hamid Malekizade, Mohammad Reza Jahed-Motlagh, Bijan Moaveni, Ali Moarefianpur and **Hassan Ghassemi**, Robust model predictive control employed to the container ship roll motion using fin-stabilizer, *Cogent Engi*, 2016, pp1-15.
- [11]. Ehsan Esmailian, **Hassan Ghassemi**, Hassan Zakerdoost Systematic probabilistic design methodology for simultaneously optimizing the ship hull-propeller system, *International Journal of Naval Architecture and Ocean Engineering*, (2016).
- [12]. Ehsan Yari, **Hassan Ghassemi**, Hydrodynamic analysis of the surface-piercing propeller in unsteady open water condition using boundary element method, *International Journal of Naval Architecture and Ocean Engineering* 8 (2016), pp22-37.
- [13]. Ehsan Yari, **Hassan Ghassemi**, Numerical analysis of surface piercing propeller in unsteady conditions and cupped effect on ventilation pattern of blade cross-section, *J Mar Sci Technol*, (2016).
- [14]. Ehsan Yari, **Hassan Ghassemi**, Numerical study of surface tension effect on the hydrodynamic modeling of the partially submerged propeller's blade section, *J of Mechanics*, (2016), DOI: 10.1017/jmech.2016.38.

- [15]. Ehsan Yari, **Hassan Ghassemi**, Boundary element method applied to added mass coefficient calculation of the skewed marine propellers, Polish Maritime Research 2 (90) 2016 Vol. 23; pp. 25-31.
- [16]. Ali Bakhshandeh Rostami, Parviz Ghadimi, **Hassan Ghassemi**, Adaptive viscous–inviscid interaction method for analysis of airfoils in ground effect, J Braz. Soc. Mech. Sci. Eng. (2016).
- [17]. Mohsen Gorji, **Hassan Ghassemi**, Jalal Mohammadi, Determining the hydro-acoustic characteristics of the ship propeller in uniform and non-uniform flow, Int. J of Eng., Transactions A: Basics Vol. 29, No. 4, (April 2016), pp530-538.
- [18]. M. Bakhtiari, S. Veysi, **Hassan Ghassemi**, Numerical modeling of the stepped planing hull in calm water, Int. J of Eng. Transactions B: Applications, Vol. 29, No. 2, (February 2016).
- [19]. Iman Farahbakhsh, **Hassan Ghassemi**, and Fereidoun Sabetghadam, A vorticity based approach to handle the fluid-structure interaction problems, Fluid Dynamic Research, 48 (2016).
- [20]. Mohammad Bakhtiari, **Hassan Ghassemi**, Controlling of the boundary layer flow on a ship hull using MHD. J Braz. Soc. Mech. Sci. Eng. (2015) 37:479–493.
- [21]. Mojtaba Kamarlouei, **Hassan Ghassemi**, Robust control for horizontal plane motions of autonomous underwater vehicles, J Braz. Soc. Mech. Sci. Eng., (2015).
- [22]. Sajad Taj Golah Veysi, Mohammad Bakhtiari, **Hassan Ghassemi**, Mahmoud Ghiasi, Toward numerical modeling of the stepped and non-stepped planing hull, J Braz. Soc. Mech. Sci. Eng. (2015) 37:1635–1645.
- [23]. Reza Shamsi, **Hassan Ghassemi**, Time-accurate analysis of the viscous flow around puller podded drive using sliding mesh method, Journal of Fluids Engineering, (January 2015), Vol. 137 / 011101-1.
- [24]. Iman Farahbakhsh, **Hassan Ghassemi**, Fereidoun Sabetghadam, An Immersed boundary method based on the kinematic relation of the velocity-vorticity formulation, Journal of Mechanics, Vol. 31, No. 2, (April 2015).
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- [26]. Ehsan Yari & **Hassan Ghassemi**, The unsteady hydrodynamic characteristics of a partial submerged propeller via a RANS solver, Journal of Marine Engineering & Technology, (2015).
- [27]. **Hassan Ghassemi**, Mojtaba Kamarlouei, Sajad Taj Golah Veysi, A hydrodynamic methodology and CFD analysis for performance prediction of stepped planing hulls, Polish Maritime Research 2(86) (2015) Vol. 22; pp.23-31, 10.2478/pomr-2015- 0014.
- [28]. **Hassan Ghassemi** and Hassan Zakerdoost, Ship hull–propeller system optimization based on the multi-objective evolutionary algorithm, Proc IMechE Part C: J Mechanical Engineering Science, (2015) DOI: 10.1177/0954406215616655.
- [29]. Mojtaba Kamarlouei, **Hassan Ghassemi**, Koorosh Aslansefat, Daniel Nematy, Multi-objective evolutionary optimization technique applied to propeller design, Acta Polytechnica Hungarica Vol. 11, No. 9, (2014).
- [30]. Morteza Ghassabzadeh, **Hassan Ghassemi**, Determining of the hydrodynamic forces on the multi-hull tunnel vessel in steady motion, J Braz. Soc. Mech. Sci. Eng. (2014) 36: pp697–708.
- [31]. Hassan Bagheri, **Hassan Ghassemi**, Genetic algorithm applied to optimization of the ship hull form with respect to seakeeping performance, Transactions of Famena XXXVIII-3 (2014).
- [32]. Iman Farahbakhsh, S. S. Nourazar, **Hassan Ghassemi**, H.-S. Dou, A. Nazari-Golshan, On the instability of plane poiseuille flow of two immiscible fluids using the energy gradient theory, Journal of Mechanics, Vol. 30, No. 3, (June 2014).
- [33]. Reza Shamsi, **Hassan Ghassemi**, Hydrodynamic analysis of puller and pusher of azimuthing podded drive at various yaw angles, Proc IMechE Part M: J Engineering for the Maritime Environment, Proc IMechE Part M: J Engineering for the Maritime Environment, (2014), Vol. 228(1) 55–69.
- [34]. Hassan Bagheri, **Hassan Ghassemi** Optimization of Wigley hull form in order to ensure the objective functions of the seakeeping performance, J. Marine Sci. Appl. (2014) 13: 422-429.
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- [36]. Reza Shamsi, **Hassan Ghassemi**, David Molyneux, Pengfei Liu, Numerical hydrodynamic evaluation of propeller (with hub taper) and podded drive in azimuthing conditions, Ocean Engineering 76 (2014) 121-135.

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- [46]. P. Ghadimi, **Hassan Ghassemi**, M. Ghassabzadeh, Z. Kiaei, Three-dimensional simulation of underwater welding and investigation of effective parameters, *Welding journal* 92, (8), (2013), pp239-249.
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- [50]. Morteza Ghassabzadeh, **Hassan Ghassemi**, Automatic Generation of the Planning Tunnel High Speed Craft Hull Form, *J. Marine Sci. Appl.* (2012) 11: 453-461.
- [51]. **Hassan Ghassemi**, Parviz Ghadimi, Hydrodynamic efficiency improvement of the high skew propeller for the underwater vehicle under surface and submerged conditions, *J. Ocean Univ. China (Oceanic and Coastal Sea Research)*, (2011) 10 (4): 314-324.
- [52]. Ehsan Yari, **Hassan Ghassemi**, The added mass coefficient computation of sphere, ellipsoid and marine propellers using boundary element method, *Polish Maritime Research* 1(68) 2011 Vol. 18; pp. 17-26.
- [53]. **Hassan Ghassemi**, M Mansouri, S Zafaranlouei, Interceptor hydrodynamic analysis for handling trim control problems in the high-speed crafts, *Proc. IMechE Vol. 225 Part C: J. Mechanical Engineering Science*, (2011).
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- [60]. Ahmad Reza Kohansal, **Hassan Ghassemi**, A numerical modeling of hydrodynamic characteristics of various planing hull forms, Ocean Engineering 37 (2010) 498–510.
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- [64]. **Hassan Ghassemi**, Hydrodynamic performance of coaxial contra-rotating propeller (CCRP) for large ships Polish Maritime Research 1(59) (2009) Vol. 16; pp.22-28.
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### Journal papers (English and Persian):

- [1]. **Hassan Ghassemi**, .... I have published many papers (Persian and English) in the journals of IJMT, MST, JHSCE, JOMASE, AJME, IJPDEA, AJAMS, A mirkabir, Sharif, Modares, Esteghlal, Mashad, OJFD, JOR, JNAME, IJE, IJMSE, AJCEA, IJEE .... **(more than 150 papers)**
- [2]. ....

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### Conference papers:

- [1]. **Hassan Ghassemi**, ....I have published many papers in the national and international conferences of the HSC, OMAE, MIC, ICMT, ICHD, ISME, AHC, ... **(more than 300 papers)**
- [2]. ....
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## **Research and Industrial Projects:**

Close link with marine industries and marine research center

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### **Patents:**

- [1]. Wave Energy Converter,
  - [2]. New Propeller Design,
  - [3]. New Craft Design,
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