

**PERSONAL INFORMATION**

- **Name:** Abbas Khayyer
- **Nationality:** Iranian
- **Date of Birth:** June, 1979
- **Present Affiliation:** Associate Professor  
Laboratory of Applied Mechanics  
Department of Civil and Earth Resources Engineering  
Kyoto University  
Katsura Campus, Nishikyo-ku, Kyoto, 615-8540, Japan  
E-mail: [khayyer@particle.kuciv.kyoto-u.ac.jp](mailto:khayyer@particle.kuciv.kyoto-u.ac.jp)

**EDUCATION**

- Oct. 2005 – Sep. 2008**      *Doctoral Course Student*, Department of Urban & Environmental Engineering, Kyoto University, Japan  
*Dissertation Title:* “Improved Particle Method by Refined Differential Operator Models for Simulation of Free-Surface Fluid Flows”  
*Supervisor:* Professor Hitoshi Gotoh
- Sep. 2002 – Mar. 2005**      *Master Course Student*, College of Civil Engineering, Iran University of Science and Technology, Iran  
*Thesis Title:* “Numerical Study of Breaking Waves and Turbulence Effects” (Grade: 19.62 / 20)  
*Supervisors:* Dr. Abbas Yeganeh-Bakhtiary, Dr. Abbas Ghaheri
- Sep. 1997 – Sep. 2002**      *Bachelor Course Student*, Department of Civil Engineering, Shiraz, Iran
- Oct. 1994 – Jun. 1997**      *High School Student*, Tohid High School, Shiraz, Iran
- Oct. 1992 – Sep. 1994**      *High School Student*, Keira High School, Wollongong, Australia

## EMPLOYMENT

<b>April 2013 – present</b>	Associate Professor, Department of Civil and Earth Resources Engineering, Kyoto University, Japan
<b>Nov. 2009 – March 2013</b>	Lecturer, Department of Civil and Earth Resources Engineering, Kyoto University, Japan
<b>Oct. 2008 – Oct. 2009</b>	Postdoctoral Research Associate, Department of Urban & Environmental Engineering, Kyoto University, Japan

## TEACHING DETAILS

### Graduate School

- Coastal Wave Dynamics
- Computational Fluid Dynamics

### Undergraduate School

- Coastal Environmental Engineering
- Hydraulics and Exercises
- Thermodynamics
- Design of Infrastructure
- Exercises in Infrastructure Design
- Introduction to Global Engineering
- Scientific English Debate

## AWARDS

- Excellent Student Award, Shiraz University, 1999.
- Scholarship of the Japanese Government, Ministry of Education, Culture, Sports, Science and Technology for the Doctoral Course (Oct. 2005 – Sep. 2008).
- Best Paper Award of international sessions for the paper “Refined simulation of solitary plunging breaker by CMPS method”, 52<sup>nd</sup> Annual Meeting of Hydraulic Engineering, Japan Society of Civil Engineers (JSCE), March 2008, Hiroshima, Japan.

## PUBLICATIONS

### Full Refereed Journal Papers (ISI Journals)

- 1) **Khayyer, A.**, Gotoh, H. and Shao, S.D.: Corrected Incompressible SPH method for accurate water-surface tracking in breaking waves, *Coastal Engineering*, 55(3), 236-250, 2008. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)] [Citation Index: **Ranked 1<sup>st</sup>** among the 2008 *Coastal Engineering* papers]
- 2) **Khayyer, A.** and Gotoh, H.: Development of CMPS method for accurate water-surface tracking in breaking waves, *Coastal Engineering Journal*, 50(2), 179-207, 2008. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)] [Citation Index: **Ranked 1<sup>st</sup>** among the 2008 *Coastal Engineering Journal* papers]
- 3) **Khayyer, A.** and Gotoh, H.: Modified MPS methods for prediction of 2D wave impact pressure, *Coastal Engineering*, 56(4), 419-440, 2009. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)] [Citation Index: **Ranked 2<sup>nd</sup>** among the 2009 *Coastal Engineering* papers]
- 4) **Khayyer, A.**, Gotoh, H. and Shao, S.D.: Enhanced predictions of wave impact pressure by improved incompressible SPH methods, *Applied Ocean Research*, 31(2), 111-131, 2009. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)] [Citation Index: **Ranked 1<sup>st</sup>** among the 2009 *Applied Ocean Research* Papers]
- 5) **Khayyer, A.** and Gotoh, H.: Wave impact pressure calculations by improved SPH methods, *International Journal of Offshore and Polar Engineering*, 19(4), 300-307, 2009. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)]
- 6) **Khayyer, A.** and Gotoh, H.: A higher order Laplacian model for enhancement and stabilization of pressure calculation by the MPS method, *Applied Ocean Research*, 32(1), 124-131, 2010. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)] [Citation Index: **Ranked 1<sup>st</sup>** among the 2010 *Applied Ocean Research* Papers]
- 7) **Khayyer, A.** and Gotoh, H.: On particle-based simulation of a dam break over a wet bed, *Journal of Hydraulic Research*, 48(2), 238-249, 2010. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)]
- 8) **Khayyer, A.** and Gotoh, H.: Discussion on “Numerical simulation of impact loads using a particle method”, *Ocean Engineering*, 37(16), 1477-1479, 2010. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)]
- 9) **Khayyer, A.** and Gotoh, H.: “Enhancement of stability and accuracy of the Moving Particle Semi-implicit Method”, *Journal of Computational Physics*, 230(8), 3093-3118,

2011. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)]
- 10) Hori, C., Gotoh, H., Ikari, H. and **Khayyer, A.**: “GPU-acceleration for Moving Particle Semi-implicit method”, *Computers & Fluids*, 51(1), 174-183, 2011. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)]
  - 11) **Khayyer, A.** and Gotoh, H.: “A 3D higher order Laplacian model for enhancement and stabilization of pressure calculation in 3D MPS-based simulations”, *Applied Ocean Research*, 37, 120-126, 2012. [[Link](#); Citations by [ISI Web of Knowledge](#), [Scopus](#)]
  - 12) **Khayyer, A.** and Gotoh, H.: “Enhancement of performance and stability of MPS mesh-free particle method for multiphase flows characterized by high density ratios”, *Journal of Computational Physics*, 242, 211-233, 2013, [[Link](#), Citations by [ISI Web of Knowledge](#), [Scopus](#)].
  - 13) Tsuruta, N., **Khayyer, A.** and Gotoh, H.: “A short note on dynamic stabilization of Moving Particle Semi-implicit method”, *Computers and Fluids*, 82, 158-164, 2013 [[Link](#), Citations by [ISI Web of Knowledge](#), [Scopus](#)].
  - 14) Liang, D., Gotoh, H., **Khayyer, A.** and Chen, J.: “Boussinesq modeling of solitary wave and N-wave runup on coast”, *Applied Ocean Research*, 42, 144-154, 2013 [[Link](#), Citations by [ISI Web of Knowledge](#), [Scopus](#)].
  - 15) Gotoh, H., **Khayyer, A.**, Ikari, H., Arikawa, T. and Shimosako, K.: “On enhancement of Incompressible SPH method for simulation of violent sloshing flows”, *Applied Ocean Research*, 46, 104-115, 2014 [[Link](#), Citations by [ISI Web of Knowledge](#), [Scopus](#)].
  - 16) Hwang, S.C., **Khayyer, A.**, Gotoh, H. and Park, J.C.: “Development of a fully Lagrangian MPS-based coupled method for simulation of fluid-structure interaction problems”, *Journal of Fluids and Structures*, 50, 497-511, 2014 [[Link](#), Citations by [ISI Web of Knowledge](#), [Scopus](#)].
  - 17) Tsuruta, N, **Khayyer, A.** and Gotoh, H.: “Space potential particles to enhance the stability of projection-based particle methods”, *International Journal of Computational Fluid Dynamics*, 29(1), 100-119, 2015 [[Link](#), Citations by [ISI Web of Knowledge](#), [Scopus](#)]
  - 18) Ikari, H., **Khayyer, A.** and Gotoh, H.: “Corrected higher order Laplacian for enhancement of pressure calculation by projection-based particle methods with applications in ocean engineering”, *Journal of Ocean Engineering and Marine Energy*, ISSN: 2198-6444, 1(4), 361-376, 2015 [[Link](#), Citations by [ISI Web of Knowledge](#), [Scopus](#)]

- 19) **Khayyer, A.** and Gotoh, H.: “A Multiphase Compressible-Incompressible Particle Method for Water Slamming”, *International Journal of Offshore and Polar Engineering*, ISSN: 1053-5381, 26(1), 20-25, 2016 [[Link](#), Citations by ISI Web of Knowledge, Scopus].
- 20) Gotoh, H. and **Khayyer, A.**: “Current achievements and future perspectives for projection-based particle methods with applications in ocean engineering”, *Journal of Ocean Engineering and Marine Energy*, in press, DOI: 10.1007/s40722-016-0049-3 [[Link](#), Citations by ISI Web of Knowledge, Scopus].
- 21) Hwang, S.C., Park, J.C., Gotoh, H., **Khayyer, A.** and Kang, K.J. : “Numerical simulations of sloshing flows with elastic baffles by using a particle-based fluid–structure interaction analysis method”, *Ocean Engineering*, 118, 227-241, 2016. [[Link](#), Citations by ISI Web of Knowledge, Scopus].

### Full Refereed Journal Papers (Other Journals)

- 22) **Khayyer, A.**, Yeganeh-Bakhtiary, A., Ghaheri, A. and Asano, T.: Numerical Simulation of Breaking Waves by a VOF-Type Numerical Model, *International Journal of Civil Engineering*, 2(4), pp. 201-212, 2004. [[Link](#)]
- 23) **Khayyer, A.** and Gotoh, H.: Applicability of MPS Method to Breaking and Post-Breaking of Solitary Waves, *Annual Journal of Hydraulic Engineering*, JSCE, 51, pp. 175-180, 2007.
- 24) **Khayyer, A.**, Gotoh, H. and Shao, S.D.: Development of CISP method for accurate water-surface tracking in plunging breaker, *Annual Journal of Coastal Engineering*, JSCE, 54, pp. 16-20, 2007 (in Japanese).
- 25) **Khayyer, A.** and Gotoh, H.: Refined simulation of solitary plunging breaker by CMPS method, *Annual Journal of Hydraulic Engineering*, JSCE, 52, pp. 121-126, 2008.
- 26) **Khayyer, A.** and Gotoh, H.: Particle-Based vs. Grid-Based Simulation of Plunging Breaking Waves; A Basic Study, *Journal of Hydrosience and Hydraulic Engineering*, JSCE, 26(1), pp. 1-9, 2008.
- 27) **Khayyer, A.** and Gotoh, H.: Development of CMPS-HS method for attenuation of pressure fluctuation in particle method, *Annual Journal of Coastal Engineering*, JSCE, 55, pp. 16-20, 2008 (in Japanese).
- 28) Gotoh, H., **Khayyer, A.**, Ikari, H. and Hori, H.: Development of 3D Parallelized CMPS Method with Optimized Domain Decomposition, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 65(1), pp. 41-45, 2009 (in Japanese). [[Link](#)]

- 29) **Khayyer, A.**, Gotoh, H., Hori, H.: Accurate Particle Methods for Refined Simulations of Complicated Breaking Waves, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 65(1), pp. 31-35, 2009 (in Japanese). [[Link](#)]
- 30) Gotoh, H., **Khayyer, A.**, Hori, H.: A New Assessment Criterion of Free-Surface for Stabilizing Pressure Field in Particle Methods, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 65(1), pp. 21-25, 2009 (in Japanese). [[Link](#)]
- 31) Gotoh, H., Hori, H., Ikari, H. and **Khayyer, A.**: Semi-implicit algorithm of particle method accelerated by GPU, *Doboku Gakkai Ronbunshuu B*, 66(2), 217-222, 2010. [[Link](#)]
- 32) Gotoh, H., **Khayyer, A.**, Ikari, H., Hori, H. and Ichikawa, Y.: Simulation of sloshing by accurate particle method with higher order Laplacian model, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 66(1), 51-55, 2010 (in Japanese). [[Link](#)]
- 33) Gotoh, H., Hori, H., Ikari, H. and **Khayyer, A.**: GPU-accelerated 3D MPS method for numerical wave flume, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 66(1), 56-60, 2010 (in Japanese). [[Link](#)]
- 34) Tsuruta, N., **Khayyer, A.** and Gotoh, H.: Dynamic stabilizer for an accurate DEM-MPS method, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 69(2), 1006-1010, 2013 (in Japanese). [[Link](#)]
- 35) Gotoh, H., **Khayyer, A.**, Tsuruta, N. and Yamamoto, K.: Numerical simulation of breaking waves using an accurate particle method with SPS turbulence modeling, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 69(2), 16-20, 2013 (in Japanese). [[Link](#)]
- 36) Gotoh, H., Arikawa, T., **Khayyer, A.**, Ikari, H., Shimosako, K., Araki K. and Uehara Y.: Accurate Incompressible SPH Method for Simulation of Wave Breaking on Vertical Seawall, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 70(2), 21-25, 2014 (in Japanese). [[Link](#)]
- 37) Tsuruta, N, **Khayyer, A.** and Gotoh, H.: Proposal of Novel Wave-Making Model for Numerical Flume by the Accurate Particle Method, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 70(2), 31-35, 2014 (in Japanese). [[Link](#)]
- 38) **Khayyer, A.**, Gotoh, H. and Tsuruta, N.: A New Surface Tension for Particle Methods with Enhanced Splash Computation, *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 70(2), 26-30, 2014. [[Link](#)]
- 39) **Khayyer, A.**, Gotoh, H., Park J.C., Hwang S.C. and Koga, T.: An enhanced fully Lagrangian coupled MPS-based solver for fluid-structure interactions, *Journal of JSCE*

(*Coastal Eng.*), ISSN: 1884-2399, 71, 883-888, 2015. [[Link](#)]

- 40) Gotoh, H., **Khayyer, A.**, Ikari, H. and Shimizu, Y.: Wave propagation simulation by accurate MPS method with high energy conservation property, *Journal of JSCE (Coastal Eng.)*, ISSN: 1884-2399, 71, 25-30, 2015 (in Japanese). [[Link](#)]

### Conference Papers (International)

- 41) **Khayyer, A.**, Yeganeh-Bakhtiary, A., Ghaheri, A., Gotoh, H. and Sakai, T.: Numerical Study of Turbulence Dynamics in Plunging & Surging Breaking Waves, *XXXI IAHR Congress*, Seoul, Korea, pp. 5942-5950, September 2005.
- 42) **Khayyer, A.**, Yeganeh-Bakhtiary, A., Gotoh, H. and Sakai, T.: Numerical Study of Turbulence Structure in Surging Breaking Waves, *Proc. Arabiancoast Conference*, Dubai, UAE, November 2005.
- 43) Gotoh, H., **Khayyer, A.** and Shao, S.D.: Corrected Incompressible SPH Model for the Simulation of Wave Breaking and Post-Breaking, *Violent Flows 2007*, Fukuoka, Japan, pp. 47-53, November 2007.
- 44) **Khayyer, A.**, Gotoh, H. and Shao, S.D.: Corrected Incompressible SPH method for accurate water-surface tracking in plunging breaking waves, *APCOM07 in conjunction with EPMESC*, Kyoto, Japan, pp. 268, December 2007.
- 45) **Khayyer, A.**, Gotoh, H. and Shao, S.D.: Corrected SPH for incompressible fluid for accurate water-surface tracking in breaking waves, *International Conference on Coastal Engineering*, Hamburg, Germany, pp. 132-143, September 2008.
- 46) Gotoh, H. and **Khayyer, A.**: Improved MPS methods for refined simulation of free-surface hydrodynamic flows, *8<sup>th</sup> International Conference on Hydrosience and Engineering*, Nagoya, Japan, pp. 605, September 2008.
- 47) **Khayyer, A.**, Gotoh, H. and Shao, S.D.: An improved incompressible SPH method for wave impact simulations, *4<sup>th</sup> international SPHERIC workshop*, Nantes, France, pp. 286-293, May 2009.
- 48) Gotoh, H., **Khayyer A.** and Ikari, H.: Simulation of SPHERIC benchmark test 2, 3D schematic dam break and evolution of the free surface, by an improved parallelized particle method and SPHysics, *4<sup>th</sup> international SPHERIC workshop*, Nantes, France, pp. 265-272, May 2009.
- 49) **Khayyer, A.** and Gotoh, H.: Wave impact calculations by improved SPH methods, *19<sup>th</sup> International Offshore and Polar Engineering, ISOPE 2009*, Osaka, Japan, pp. 340-347, June 2009.

- 50) Gotoh, H, **Khayyer, A.**, Ikari, H. and Hori, C.: Refined reproduction of a plunging breaking wave and resultant splash-up by 3D-CMPS method, *19<sup>th</sup> International Offshore and Polar Engineering, ISOPE 2009*, Osaka, Japan, pp. 518-524, June 2009.
- 51) **Khayyer, A.** and Gotoh, H.: Improved MPS methods for wave impact calculations, *Proceedings of Coastal Dynamics 2009*, World Scientific Publication, Tokyo, Japan, paper No. 4, September 2009.
- 52) Gotoh, H, **Khayyer, A.**, Ikari, H. and Hori, C.: 3D-CMPS method for improvement of water surface tracking in breaking waves, *Proceedings of Coastal Dynamics 2009*, World Scientific Publication, Tokyo, Japan, paper No. 5, September 2009.
- 53) **Khayyer, A.** and Gotoh, H.: Refined wave impact pressure calculations by an enhanced particle method, *Proceedings of Coastal Structures 2011*, Paper No. C1-79, Yokohama, Japan, September 2011.
- 54) Hori, C., Gotoh, H., **Khayyer, A.** and Ikari, H.: Simulation of flip-through wave impact by CMPS method with SPS turbulence model, *Proceedings of Coastal Structures 2011*, Paper No. A8-26, Yokohama, Japan, September 2011.
- 55) Ikari, H., Gotoh, H. and **Khayyer, A.**: Numerical Simulation on Moored Floating Body in Wave by Improved Particle Method, *Proceedings of Coastal Structures 2011*, Paper No. A8-28, Yokohama, Japan, September 2011.
- 56) **Khayyer, A.** and Gotoh, H.: A consistent particle method for simulation of multiphase flows with high density ratios, *7<sup>th</sup> international SPHERIC workshop*, Prato, Italy, pp. 340-346, May 2012.
- 57) Gotoh, H. and **Khayyer, A.**: An improved consistent 3D particle method for enhanced wave impact calculations, *7<sup>th</sup> international SPHERIC workshop*, Prato, Italy, pp. 375-380, May 2012.
- 58) **Khayyer, A.**, Gotoh, H., Ikari, H. and Tsuruta, N.: An Enhanced Particle Method for Simulation of Violent Multiphase Flows, Proc. 2nd International Conference on Violent Flows, Nantes, France, pp.51-57, 2012.
- 59) Gotoh, H., **Khayyer, A.**, Ikari, H. and Tsuruta, N.: An Improved 3D Particle Method for Violent Wave Impact Calculations, Proc. 2nd International Conference on Violent Flows, Nantes, France, pp.188-193, 2012.
- 60) **Khayyer, A.**, Gotoh, H., Ikari, H. and Tsuruta, N.: A Novel Error-Minimizing Scheme to Enhance the Performance of Compressible-Incompressible Multiphase Projection-Based Particle Methods, *8<sup>th</sup> international SPHERIC workshop*, Trondheim, Norway, pp. 68-73, June 2013.



- 61) Tsuruta, N., **Khayyer, A.**, Gotoh, H., Ikari, H.: A Simple and Effective Scheme for Dynamic Stabilization of Particle Methods, *8<sup>th</sup> international SPHERIC workshop*, Trondheim, Norway, pp. 55-61, June 2013.
- 62) **Khayyer, A.**, Gotoh, H. and Tsuruta N.: A Novel Laplacian-Based Surface Tension Model for Particle Methods, *9<sup>th</sup> international SPHERIC workshop*, Paris, France, pp. 64-71, June 2014.
- 63) Tsuruta N., **Khayyer, A.** and Gotoh, H.: Space Potential Particles as Free-Surface Boundary Condition in Projection-Based Particle Methods, *9<sup>th</sup> international SPHERIC workshop*, Paris, France, pp. 56-63, June 2014.
- 64) **Khayyer, A.** and Gotoh, H.: A Multi-Phase Compressible-Incompressible Particle Method for Water Slamming, *The Twenty-fifth International Offshore and Polar Engineering Conference, International Society of Offshore and Polar Engineers*, Kona, Hawaii, USA, ISOPE-I-15-397, June 2015.
- 65) Hwang, S.C., **Khayyer, A.**, Gotoh, H. and Park, J.C.: Simulations of Incompressible Fluid Flow-Elastic Structure Interactions by a Coupled Fully Lagrangian Solver, *The Twenty-fifth International Offshore and Polar Engineering Conference, International Society of Offshore and Polar Engineers*, Kona, Hawaii, USA, ISOPE-I-15-398, June 2015.
- 66) Gotoh, H., **Khayyer, A.** and Shimizu, Y.: Improvement of Energy Conservation in Particle Methods with Enhanced Schemes, *The Twenty-fifth International Offshore and Polar Engineering Conference, International Society of Offshore and Polar Engineers*, Kona, Hawaii, USA, ISOPE-I-15-396, June 2015.
- 67) **Khayyer, A.**, Gotoh, H., Shimizu, Y. and Gotoh, K.: On Enhancement of Energy Conservation Properties of ISPH and MPS Methods, *10<sup>th</sup> international SPHERIC workshop*, Parma, Italy, pp. 139-146, June 2015.
- 68) Gotoh, H., Tsuruta, N. and **Khayyer, A.**: A novel multi-scale technique for projection-based particle methods, *10<sup>th</sup> international SPHERIC workshop*, Parma, Italy, pp. 147-154, June 2015.
- 69) **Khayyer, A.**, Gotoh, H., Falahaty, H. and Koga, T.: Enhanced Fully-Lagrangian MPS-Based Solvers for Violent Incompressible Fluid Flow, Non-Linear Elastic Structure Interactions, *Proceedings of 3<sup>rd</sup> international conference on Violent Flows*, Osaka, Japan, Paper No. 15, March 2016.

### Conference Papers (Domestic)

- 70) **Khayyer, A.**, Yeganeh-Bakhtiary, A., Ghaheri, A. and Asano, T.: Numerical Simulation of Wave Transformation Phenomena in Surf Zone, *Proc. 2<sup>nd</sup> National Civil Engineering Congress*, Iran University of Science and Technology, Iran, No. 1089, April 2005.

- 71) **Khayyer, A.**, Gotoh, H, Ikari, H. and Hori, C.: Development of 3D parallelized CMPS-HS method with a dynamic domain decomposition approach, *Proceedings of International Sessions in Conference on Coastal Engineering, JSCE*, 1, 6-10, November 2010.
- 72) **Khayyer, A.**, Gotoh, H, Ikari, H.: Refined simulations of violent sloshing flows by an enhanced particle method, *Proceedings of International Sessions in Conference on Coastal Engineering, JSCE*, 2, 6-10, November 2011.
- 73) **Khayyer, A.**, Gotoh, H, Ikari, H.: Development of a novel 3D higher order Laplacian model for enhanced prediction of wave impact pressure calculation in 3D MPS-based simulations, *Proceedings of International Sessions in Conference on Coastal Engineering, JSCE*, 3, 11-15, November 2012.
- 74) **Khayyer, A.**, Gotoh, H., Tsuruta, N., Kubota, H. and Yamamoto, K.: An Enhanced Multiphase MPS Method for Simulation of Violent Sloshing Flows Characterized by Air Entrapment/Entrainment, *Proceedings of International Sessions in Conference on Coastal Engineering, JSCE*, 4, 6-10, November 2013.

## OTHER PRESENTATIONS

1. Gotoh, H. and **Khayyer, A.**: “Improved MPS Methods for Attenuation of Pressure Fluctuation”, Annual Meeting on Particle Methods, the University of Tokyo, February 2008.
2. Gotoh, H. and **Khayyer, A.**: “Development of 3D Parallelized CMPS Method”, Annual Meeting on Particle Methods, the University of Tokyo, March 2009.
3. **Khayyer, A.** and Gotoh, H.: “Enhancement and Stabilization of MPS method with Applications to Multiphase Flows”, Annual Meeting on Particle Methods, the Univ. of Tokyo, February 2011.
4. **Khayyer, A.** and Gotoh, H.: “Enhancement and Stabilization of MPS method for Simulation of Multiphase Flows Characterized by High Density Ratios”, Annual Meeting on Particle Methods, the Univ. of Tokyo, March 2013.

## PATENT

- Gotoh, H. and **Khayyer, A.**: Method and device for determining interface particle used in particle method, and program for determining interface particle, US 20110172948 A1, July 14, 2011. [[Link](#)]

## SCIENTOMETRIC DATA

### Elsevier's Scopus Data:

Scopus Author ID: 23396958000 [[Link](#)]

Number of documents: 24

Citations: 540 total citations by 288 documents

*h*-index: 12

### ISI Web of Science Data:

Number of documents: 24 [[Link](#)]

Number of citations: 461

*h*-index: 12

### Google Scholar Data:

Number of documents: 68 [[Link](#)]

Citations: 923

*h*-index: 14

i10-index: 14

## INTERNATIONAL SCIENTIFIC ACTIVITIES

- **Associate Editor:** [International Journal of Offshore and Polar Engineering \(IJOPE\)](#)
- **Editorial Board:** [Applied Ocean Research](#)
- **Reviewer:** [Applied Ocean Research](#)  
[Applied Mathematics and Computation](#)  
[Computer Methods in Applied Mechanics and Engineering](#)  
[Computers and Fluids](#)  
[Computer Physics Communications](#)  
[Computational Particle Mechanics](#)  
[Coastal Engineering Journal](#)  
[Computers and Mathematics with Applications](#)  
[European Journal of Mechanics - B/Fluids](#)  
[Fluid Dynamics Research](#)  
[International Journal for Numerical Methods in Fluids](#)  
[International Journal of Offshore and Polar Engineering](#)

International Journal of Computational Fluid Dynamics  
International Journal of Heat and Mass Transfer  
Journal of Computational Physics  
Journal of Ocean Engineering and Marine Energy  
Journal of Hydraulic Research  
Journal of Fluids and Structures  
Journal of Waterway, Port, Coastal and Ocean Engineering  
Ocean Engineering  
Ocean Modelling  
ISOPE International Conferences

- **Technical Program**

**Committee:** ISOPE 2015, ISOPE 2016

## PROFESSIONAL ASSOCIATIONS

- Member of Japan Society of Civil Engineers (JSCE)
- Member of Japan Society of Computational Engineering and Science (JSCES)
- Member of International Association of Hydraulic Engineering and Research (IAHR)
- Member of Research Committee of Computational Wave Flume (JSCE)
- Scientific Committee member of SPHERIC (SPH European Research Interest Community)

## COMPUTER SKILLS

- **Programming Languages:** FORTRAN, C++, MATLAB, Visual Basic
- **Parallel programming:** MPI
- **Data processing software:** Tecplot, SigmaPlot, MS Office, IGOR Pro
- **Graphics:** Adobe Illustrator, Adobe Photoshop, Adobe InDesign
- **Engineering Packages:** SAP2000, SAFE, AutoCAD, Plaxis
- **Mathematical/Statistical Packages:** SPSS, Mathematica

## LANGUAGES

- **Persian** (Mother Tongue)
- **English** (Excellent in Speaking, Listening, Reading and Writing)
- **Arabic** (Fair in Reading and Writing)
- **Japanese** (Fair in Listening and Speaking)

## RESEARCH INTERESTS

- Particle Methods
- Computational Fluid Dynamics
- Fluid-Structure Interaction
- Turbulence Modeling

## RESEARCH GRANTS

- Grant-in-Aid for Young Scientists by Japan Society for the Promotion of Science, “Development of an accurate and efficient particle method for practical simulations of multiphase fluid flows”, April 1, 2013~March 31, 2015. [[Link](#)]
- Grant-in-Aid for Young Scientists by Japan Society for the Promotion of Science, “Development of a computational method for hydroelastic multiphase water slamming problems”, April 1, 2016~March 31, 2018.

## REFERENCES

### 1. Prof. Hitoshi Gotoh

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