CURRICULUM VITAE

July 10, 2018

PERSONAL INFORMATION

Name:	Abbas Khayyer
Nationality:	Iranian
Date of Birth:	June, 1979
Current Position:	Associate Professor (Tenured)
	Laboratory of Applied Mechanics,
	Department of Civil & Earth Resources Engineering
	Kyoto University, Nishikyo-ku, Kyoto 615-8540, Japan
Email:	khayyer@particle.kuciv.kyoto-u.ac.jp

EDUCATION BACKGROUND

Sep. 1997 – Sep. 2002:	*Bachelor Course Student*, Department of Civil Engineering, Shiraz, Iran
Oct. 2002 – Mar. 2005:	*Master Course Student*, College of Civil Engineering, Iran University of Science and Technology, Iran
Oct. 2005 – Sep. 2008:	*Doctoral Course Student*, Department of Urban & Environmental Engineering, Kyoto University, Japan

EMPLOYMENT

Oct. 2008 – Oct. 2009:	*Postdoctoral Research Associate*, Department of Urban & Environmental Engineering, Kyoto University, Japan
Nov. 2009 – March 2013:	*Lecturer*, Department of Civil and Earth Resources Engineering, Kyoto University, Japan
April 2013 – present:	*Associate Professor (Tenured)*, Department of Civil and Earth Resources Engineering, Kyoto University, Japan

PROFESSIONAL ASSOCIATIONS

Scientific Committee member of SPHERIC (SPH European Research Interest Community)

Member of International Society of Offshore and Polar Engineering (ISOPE)

Member of International Association of Hydraulic Engineering and Research (IAHR)

Member of Japan Society of Civil Engineers (JSCE)

Member of Japan Society of Computational Engineering and Science (JSCES)

Member of Research Committee of JSCE Computational Wave Flume

RESEARCH GRANTS

Grant-in-Aid for Scientific Research (B) by Japan Society for the Promotion of Science, "Development of numerical wave flume for a resilient design of coastal structures against violent waves", April 2009 ～ March 2011 (Co-Investigator) [Link]

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 (Principal Investigator) [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 (Principal Investigator) [Link]

Grant-in-Aid for Scientific Research (A) by Japan Society for the Promotion of Science, "Innovative design of breakwaters as coastal city protection measures against storm surges during typhoons", April 2018 ～ March 2021 (Co-Investigator) [Link]

Grant-in-Aid for Scientific Research (C) by Japan Society for the Promotion of Science, "Development of a reliable and adaptive multi-physics computational method for fluid-structure interactions encountered in ocean/coastal engineering", April 2018 ～ March 2022 (Principal Investigator) [Link]

INTERNATIONAL SCIENTIFIC ACTIVITIES

Editorial Board: Applied Ocean Research [Link]

Associate Editor: International Journal of Offshore and Polar Engineering [Link]

Associate Editor: Ocean Systems Engineering [Link]

Guest Editor: Coastal Engineering Journal [Link]

Scientific Committee of SPHERIC (SPH European Research Interest Community) [Link]

Technical Program Committee: ISOPE International Conferences [Link]

Reviewer: For more than 25 SCI International Journals

Review Committee Candidate: for Japan Society of Promotion of Science (JSPS)

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, 52nd Annual Meeting of Hydraulic Engineering, Japan Society of Civil Engineers (JSCE), March 2008, Hiroshima, Japan [Link]

C H Kim Award by the International Society of Offshore and Polar Engineers (ISOPE) in recognition of outstanding technical achievements in and exceptional contribution to computational fluid mechanics in ocean engineering (June 13, 2018) [Link]

PATENT

Gotoh, H. and **Khayyer, A.**: Method and device for determining interface particle used in particle method, and program for determining interface particle, WO/2010/032656, March 2010. [Link]

SCIENTOMETRIC DATA

Scopus	Number of documents: 41,	Citations: 1195,	*h*-index: 18	[Link]
Web of Science	Number of documents: 36,	Citations: 933,	*h*-index: 15	[Link]
Google Scholar	Number of documents: 100,	Citations: 1879,	*h*-index: 19	[Link]

PUBLICATIONS

Full Refereed Journal Papers (SCI Journals)

1. **Khayyer, A.**, Gotoh, H., Falahaty, H., Shimizu, Y.: An enhanced ISPH-SPH coupled method for simulation of incompressible fluid-elastic structure interactions, *Computer Physics Communications*, 2018, in press. [Link]

2. **Khayyer, A.**, Gotoh, H., Shimizu, Y., Gotoh, K., Falahaty, H., Shao, S.: Development of a projection-based SPH method for numerical wave flume with porous media of variable porosity, *Coastal Engineering*, 140, 1-22, 2018. [Link]

3. Falahaty, H., **Khayyer, A.**, Gotoh, H.: Enhanced particle method with stress point integration for simulation of incompressible fluid-nonlinear elastic structure interaction, *Journal of Fluids and Structures*, 81, 325-360, 2018. [Link]

4. **Khayyer, A.**, Gotoh, H., Falahaty, H. and Shimizu, Y.: Towards development of enhanced fully-Lagrangian mesh-free computational methods for fluid-structure interaction, *Journal of Hydrodynamics*, 30(1), 49-61, 2018. [Link]

5. Gotoh, H. and **Khayyer, A.**: On the state-of-the-art of particle methods for coastal and ocean engineering, *Coastal Engineering Journal*, 60, 79-103, 2018. [Link]

6. Zheng, X., Lv, X., Ma, Q., Duan, W., **Khayyer, A.**, Shao, S.: An improved solid boundary treatment for wave float interactions using ISPH method, *International Journal of Naval Architecture and Ocean Engineering*, 10(3), 329-347, 2018. [Link]

7. Harada, E., Gotoh, H., Ikari, H. and **Khayyer, A.**: Numerical simulation for sediment transport using MPS-DEM coupling model, *Advances in Water Resources*, in press, https://doi.org/10.1016/j.advwatres.2017.08.007 [Link]

8. Zhang, N., Zheng, X., Ma, Q., Duan, W., **Khayyer, A.**, Lv, X. and Shao, S.: A hybrid stabilization technique for simulating water wave-structure interaction by incompressible Smoothed Particle Hydrodynamics (ISPH) method, *Journal of Hydro-environment Research*, 18, 77-94, 2018. [Link]

9. Zheng, X., You, Y., Ma, Q., **Khayyer, A.** and Shao, S.: A comparative study on violent sloshing with complex baffles using the ISPH method, Applied Sciences, 8(6), 904, 2018. [Link]

10. **Khayyer, A.**: Discussion: The Impact of Extreme Wave Events on a Fixed Multicolumn Offshore Platform, *International Journal of Offshore and Polar Engineering*, 27(3), 333-334, 2017. [Link]

11. **Khayyer, A.**, Gotoh, H. and Shimizu, Y.: Comparative study on accuracy and conservation properties of two particle regularization schemes and proposal of an optimized particle shifting scheme in ISPH context, *Journal of Computational Physics*, 332, 236-256, 2017. [Link]

12. **Khayyer, A.**, Gotoh, H., Shimizu, Y. and Gotoh, K.: On enhancement of energy conservation properties of projection-based particle methods, *European Journal of Mechanics B/Fluids*, 66, 20-37, 2017. [Link]

13. Zheng, X., Shao, S.D., **Khayyer, A.**, Duan, W., Ma, Q. and Liao, K.: Corrected First-order Derivative ISPH in Water Wave Simulations, *Coastal Engineering Journal*, 59, 1750010, 2017. [Link]

14. Zheng, X, Ma, QW, Shao, SD and **Khayyer, A.**: Modelling of Violent Water Wave Propagation and Impact by Incompressible SPH with First-Order Consistent Kernel Interpolation Scheme, *Water*, 9(6), 2017. [Link]

15. Harada, E., Ikari, H., Shimizu, Y., **Khayyer, A.**, Gotoh, H.: Numerical Investigation of the Morphological Dynamics of a Step-and-Pool Riverbed Using DEM-MPS, *Journal of Hydraulic Engineering*, ASCE, 144 (1), 04017058, 2017. [Link]

16. 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].

17. **Khayyer, A.** and Gotoh, H.: A multiphase compressible-incompressible particle method for water slamming, *International Journal of Offshore and Polar Engineering*, 26(1), 20-25, 2016. [Link]

18. 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]

19. 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]

20. 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]

21. 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].

22. **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]

23. Tsuruta, N., **Khayyer, A.** and Gotoh, H.: A short note on dynamic stabilization of Moving Particle Semi-implicit method, *Computers & Fluids*, 82, 158-164, 2013. [Link]

24. **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]

25. **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]

26. 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]

27. **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]

28. **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]

29. **Khayyer, A.** and Gotoh, H.: Discussion on "Numerical simulation of impact loads using a particle method", *Ocean Engineering*, 37(16), 1477-1479, 2010. [Link]

30. **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]

31. **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]

32. **Khayyer, A.** and Gotoh, H.: Modified Moving Particle Semi-implicit methods for the prediction of 2D wave impact pressure, *Coastal Engineering*, 56(4), 419-440, 2009. [Link]

33. **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]

34. **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]

Full Refereed Journal Papers (Other Journals)

35. **Khayyer, A.,** Gotoh, H., Falahaty, H., Shimizu, Y. and Nishijima, Y.: Towards development of a reliable fully-Lagrangian MPS-based FSI solver for simulation of 2D hydroelastic slamming, *Ocean Systems Engineering - An International Journal*, 7(3), 299-318, 2017. [Link]

36. **Khayyer, A.**, Gotoh, H., Shimizu, Y. Falahaty, H. and Ikari, H.: Development of a Fully Lagrangian SPH-based Computational Method for Incompressible Fluid-Elastic Structure Interactions, Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering), 73(2), I_1039-I_1044, 2017. [Link]

37. **Khayyer, A.**, Gotoh, H., Shimizu, Y., Gotoh, K. and Shao S.D.: An Enhanced Particle Method for Simulation of Fluid Flow Interactions with Saturated Porous Media, Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering), 73(2), I_841-I_846, 2017. [Link]

38. 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*, 2(3), 251-278, 2016. [Link]

39. **Khayyer, A.**, Falahaty, H., Gotoh, H. and Koga, T.: An Enhanced Coupled Lagrangian Solver for Incompressible Fluid and Non-linear Elastic Structure Interactions, *Journal of JSCE (Coastal Eng.)*, ISSN: 1884-2399, 72, 1117-1122, 2016. [Link]

40. **Khayyer, A.**, Gotoh, H. and Shimizu, Y.: Development of a SPH-Based Method for Coastal Engineering-Related Heat Diffusion Problems, *Journal of JSCE (Coastal Eng.)*, ISSN: 1884-2399, 72, 1213-1218, 2016. [Link]

41. 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*, 1(4), 361-376, 2015. [Link]

42. 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]

43. **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]

44. **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]

45. 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]

46. 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]

47. 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]

48. 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]

49. 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]

50. 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]

51. 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]

52. 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]

53. **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]

54. 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]

55. **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. [Link]

56. **Khayyer, A.** and Gotoh, H.: Particle-Based vs. Grid-Based Simulation of Plunging Breaking Waves; A Basic Study, *Journal of Hydroscience and Hydraulic Engineering,* JSCE, 26(1), pp. 1-9, 2008. [Link]

57. **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). [Link]

58. **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. [Link]

59. **Khayyer, A.**, Gotoh, H. and Shao, S.D.: Development of CISPH method for accurate water-surface tracking in plunging breaker, *Annual Journal of Coastal Engineering*, JSCE, 54, pp. 16-20, 2007 (in Japanese). [Link]

60. **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]

International Conference Papers

61. **Khayyer, A.**, Gotoh, H., Shimizu, Y., Tsuruta, N. and Sasagawa, H.: Development of consistent, conservative and accurate multi-resolution projection-based particle methods for hydroelastic fluid-structure interactions, 13th International SPHERIC Workshop, Galway, Ireland, 110-117, June 26-28, 2018.

62. Tsuruta, N., **Khayyer, A.** and Gotoh, H.: Enhancement of accuracy of stabilizer for projection-based particle method, 13th International SPHERIC Workshop, Galway, Ireland, 9-15, June 26-28, 2018.

63. Falahaty, H., **Khayyer, A.** and Gotoh, H.: A coupled incompressible SPH-Hamiltonian SPH for fluid-structure interactions, 28th International Ocean and Polar Engineering Conference, ISOPE 2018, Sapporo, Japan, 581-588, June 10-15, 2018.

64. Shimizu, Y., Tsuruta, N., **Khayyer, A.** and Gotoh, H.: On development of accurate multi-phase particle methods with SPS turbulence modeling for ocean engineering applications, 28th International Ocean and Polar Engineering Conference, ISOPE 2018, Sapporo, Japan, 532-538, June 10-15, 2018.

65. **Khayyer, A.**, Gotoh, H., Shimizu, Y. and Teng, K.W.P.: Two novel projection-based particle methods for multiphase flows with large density ratios and discontinuous density fields, 12th international SPHERIC workshop, Ourense, Spain, 159-166, June 2017.

66. **Khayyer, A.** and Gotoh, H.: Projection-based particle methods-latest achievements and future perspectives, Keynote presentation, 7th International Conference on Computational Methods (ICCM2016), University of California at Berkeley, CA, USA, August 1-4, 2016.

67. **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 3rd international conference on Violent Flows, Osaka, Japan, Paper No. 15, March 2016.

68. **Khayyer, A.**, Gotoh, H. and Shimizu, Y.: Comparative Study on Accuracy and Conservation Properties of Particle Regularization Schemes and Proposal of an Improved Particle Shifting Scheme, 11th International SPHERIC Workshop, Technische Universität München (TUM), Garching, Germany, 416-423, June 2016.

69. **Khayyer, A.** and Gotoh, H.: A Multi-Phase Compressible-Incompressible Particle Method for Water Slamming, The 25th International Offshore and Polar Engineering Conference, International Society of Offshore and Polar Engineers, Kona, Hawaii, USA, ISOPE-I-15-397, June 2015.

70. **Khayyer, A.**, Gotoh, H., Shimizu, Y. and Gotoh, K.: On Enhancement of Energy Conservation Properties of ISPH and MPS Methods, 10th international SPHERIC workshop, Parma, Italy, 139-146, June 2015.

71. 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.

72. 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.

73. **Khayyer, A.**, Gotoh, H. and Tsuruta N.: A Novel Laplacian-Based Surface Tension Model for Particle Methods, 9th international SPHERIC workshop, Paris, France, pp. 64-71, June 2014.

74. Tsuruta N., **Khayyer, A.** and Gotoh, H.: Space Potential Particles as Free-Surface Boundary Condition in Projection-Based Particle Methods, 9th international SPHERIC workshop, Paris, France, pp. 56-63, June 2014.

75. **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, 8th international SPHERIC workshop, Trondheim, Norway, pp. 68-73, June 2013.

76. Tsuruta, N., **Khayyer, A**., Gotoh, H., Ikari, H.: A Simple and Effective Scheme for Dynamic

Stabilization of Particle Methods, 8th international SPHERIC workshop, Trondheim, Norway, pp. 55-61, June 2013.

77. **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.

78. 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.

79. **Khayyer, A.** and Gotoh, H.: A consistent particle method for simulation of multiphase flows with high density ratios, 7th International SPHERIC workshop, Prato, Italy, pp. 340-346, May 2012.

80. Gotoh, H. and **Khayyer, A**.: An improved consistent 3D particle method for enhanced wave impact calculations, 7th international SPHERIC workshop, Prato, Italy, pp. 375-380, May 2012.

81. **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.

82. 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.

83. 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.

84. **Khayyer, A**., Gotoh, H. and Shao, S.D.: An improved incompressible SPH method for wave impact simulations, 4th international SPHERIC workshop, Nantes, France, pp. 286-293, May 2009.

85. 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, 4th international SPHERIC workshop, Nantes, France, pp. 265-272, May 2009.

86. **Khayyer, A.** and Gotoh, H.: Wave impact calculations by improved SPH methods, 19th International Offshore and Polar Engineering, ISOPE 2009, Osaka, Japan, pp. 340-347, June 2009.

87. Gotoh, H, **Khayyer, A**., Ikari, H. and Hori, C.: Refined reproduction of a plunging breaking wave and resultant splash-up by 3D-CMPS method, 19th International Offshore and Polar Engineering, ISOPE 2009, Osaka, Japan, pp. 518-524, June 2009.

88. **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.

89. 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.

90. **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 (ICCE), Hamburg, Germany, pp. 132-143, September 2008.

91. Gotoh, H. and **Khayyer, A.**: Improved MPS methods for refined simulation of free-surface hydrodynamic flows, 8th International Conference on Hydroscience and Engineering, Nagoya, Japan, pp. 605, September 2008.

92. 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.

93. **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.

94. **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.

95. **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.

INVITED TALKS

1. Invited talk at Dalian University of Technology, Dalian, China, March 26th, 2018. Title: Particle Methods for Fluid-Structure Interactions, Latest Advancements and Future Perspectives [Link]

2. Invited talk at Harbin Engineering University, Harbin, China, March 28th, 2018. Title: Particle Methods - Past, Present, Future [Link]

3. Invited talk at the University of Manchester, Manchester, U.K., September 25th, 2017. Title: Particle Methods for Fluid-Structure Interactions, Recent Advancements and Future Perspectives [Link]

4. Invited talk at the University of Sheffield, Sheffield, U.K., September 27th, 2017. Title: Lagrangian Particle Methods: Latest Achievements and Future Perspectives [Link]

5. Invited talk at Osaka University, Osaka, Japan, May 15th, 2017. Title: Lagrangian Particle Methods for Ocean Engineering - Current Achievements and Future Perspectives [Link]

6. Keynote presentation, 7th International Conference on Computational Methods (ICCM2016), University of California at Berkeley, CA, USA, August 3rd, 2016 [Link]

7. Invited speaker and a session organizer of the JSCES IWACOM workshop, Tokyo, Japan, October 2015 [Link]

TEACHING DETAILS

Graduate School
- Computational Fluid Dynamics
- Coastal Wave Dynamics
- Hydraulic Engineering for Infrastructure Development

Undergraduate School

- Thermodynamics
- Hydraulics and Exercises
- Coastal Engineering
- Design for Infrastructures I
- Exercises in Infrastructure Design
- Introduction to Global Engineering
- Advanced Scientific English Debate