

## Prof. Dr.-Ing. Ebrahim Kadivar

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### ADDRESS

Tarbiat Modares University  
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→ *GoogleScholar*  
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### ACADEMIC POSITIONS

- Professor (Assistant), Faculty of Mechanical Engineering, Tarbiat Modares University, 2025-now.
- Visiting Professor, Faculty of Mechanical Engineering, Tarbiat Modares University, 2024.
- Leader of Research Group, Cavitation and Flow Control, Institute of Ship Technology and Ocean Engineering, University of Duisburg-Essen (UDE), Germany, 2022-2024.
- Research Assistant, Institute of Ship Technology, Ocean Engineering and Transport Systems (ISMT), University of Duisburg-Essen, 2017-2020.

### EDUCATION

- Postdoc, Institute of Ship Technology and Ocean Engineering, University of Duisburg-Essen (UDE), Germany, 2020 - 2022.
  - Research Field: Experimental Investigation of Cavitation in Microscales (Investigation of laser-induced cavitation bubble dynamics).
- Ph.D., Mechanical Engineering (Fluid Mechanis, Hydrodynamics, Cavitation), University of Duisburg-Essen (UDE), Germany, 2016 - 2020.
  - Thesis: Experimental and Numerical Investigations of Cavitation Control Using Cavitating-bubble Generators. (Application of Aerodynamics in Marine Engineering)
- M.Sc., Mechanical Engineering (Fluid Mechanics), Clausthal University of Technology (CUT), Germany, 2010-2013.
  - Thesis: Aerodynamic and Constructive Loss Optimization of a Subsonic Wind Tunnel.

### FIELDS OF INTEREST

- Experimental Aerodynamics,
- Experimental Hydrodynamics,
- Experiments in Cavitation Tunnel and Wind Tunnel,
- Computational Fluid Dynamics,
- Multiphase Flows (Cavitation),
- Active and Passive Flow Control (Drag Reduction, Separation Control, ...),
- Cavitation Control on Rudder and Propeller,
- Laminar-Turbulent Transitional Flow,
- Partial and Cloud Cavitation and Supercavitation,
- Laser-induced Cavitation Bubble,
- Cavitation Exploitation (Drug delivery, Medical treatment, Material processing),
- Molecular Dynamics (MD) Simulations,
- Nanobubble dynamics.

### JOURNAL PAPERS

- [1] A. Dadvand, E. Kadivar, S.A. Bapir, K.M.A. Manmi, O. el Moctar, *Experimental and numerical study of the dynamics of a laser-induced cavitation bubble between two parallel walls: Effect of confinement and viscosity*. *Experimental and Computational Multiphase Flow* (**IF: 5.4**), Volume 8, (1), 2026.
- [2] P. Kumar, E. Kadivar, O. el Moctar, *Experimental investigation of combined active-*

- passive control on cavitating flow around a three-dimensional hydrofoil*. International Journal of Multiphase Flow (**IF: 3.8**), Volume 200, pp. 105743, 2026.
- [3] E. Kadivar, P. Kumar, *A review of hydrodynamic cavitation passive and active control methods in marine engineering applications*. Symmetry (**IF: 2.2**) Volume 17, pp. 1782, 2025.
- [4] F. Heydari, S. rajabi moghadam, M. Ghasemi, E. Saniei, S. Rezaee, E. Kadivar, O. el Moctar, *Role of Nanobubble Cavitation in Triggering Drug Release from Boron-Nitride and Carbon Nanocapsules and Their Diffusion for Drug Delivery Applications: A Molecular Dynamics Study*. International Journal of Molecular Sciences (**IF: 4.9**), Volume 26, pp. 9582, 2025.
- [5] P. Kumar, E. Kadivar, O. el Moctar, *Numerical Analysis of Cavitation Suppression on a NACA 0018 Hydrofoil Using a Surface Cavity*. Journal of Marine Science and Engineering (**IF: 2.8**), Volume 13, pp. 1517, 2025.
- [6] S. Rezaee, E. Kadivar, O. el Moctar, *Molecular dynamics based approach for laser-induced cavitation bubbles: bridging experimental and hybrid analytical-computational approaches*. Langmuir (**IF: 3.9, H-Index 383**), Volume 41, pp. 19071â19087, 2025.
- [7] P. Kumar, E. Kadivar, O. el Moctar, *Experimental study of cavitation control on a hydrofoil with bio-inspired riblets using proper orthogonal decomposition*. Ocean Engineering (**IF: 5.5**), Volume 334, pp. 121500, 2025.
- [8] E. Kadivar, D. Barman, P. Kumar, O. el Moctar, *Laser-induced single cavitation bubble dynamics in the presence of microscale roughness*. Langmuir (**IF: 3.9, H-Index 383**), Volume 41, pp. 11382-11393, 2025.
- [9] P. Kumar, E. Kadivar, O. el Moctar, *Experimental investigation of passive cavitation control on a cylinder using proper orthogonal decomposition*. Applied Ocean Research (**IF: 4.4**), Volume 158, 104569, 2025.
- [10] Q-T Nguyen, E. Kadivar, T-H Phan, V-T Nguyen, O. el Moctar, W-G Park, *Effects of free surface on dynamics of a laser-induced cavitation bubble near horizontal rigid wall*. Ocean Engineering (**IF: 5.5**), Volume 319, pp. 120258, 2025.
- [11] S.M. Javadpour, R. Soufi Noughabi, E. Kadivar, *Thermo-hydrodynamic and exergy optimization of a photovoltaic thermal (PV/T) air collector using NSGA-II*. Engineering Science and Technology, an International Journal (**IF: 5.4**), Volume 64, pp. 102030, 2025.
- [12] E. Kadivar, M Afshari, O. el Moctar, *Experimental study of the single cavitation bubble dynamics induced by laser-generated plasma near a biomimetic mesotextured boundary*. Physics of Fluids (**IF: 4.1**), Volume 37, pp. 022119 2025.
- [13] S.M. Javadpour, Erfan Kadivar, Z. Heidary Zarneh, Ebrahim Kadivar, M. Gheibi, *Optimizing Droplet Coalescence Dynamics in Microchannels: A Comprehensive Study Using Response Surface Methodology and Machine Learning Algorithms*. Heliyon (**IF: 3.6**), Volume 11, 41510, 2025.
- [14] E. Kadivar, S. Rezaee, U. Löschner, O. el Moctar, *Effects of Materials and Riblets on Erosion Mitigation Induced by Multiple Collapses of Cavitation Bubbles*. Applied Sciences (**IF: 2.5**), Volume 14(15), pp. 6452, 2024.
- [15] M.Y. Nichik, B.B. Ilyushin, E. Kadivar, O. el Moctar, K.S. Pervunin, *Cavitation suppression and transformation of turbulence structure in the cross flow around a circular cylinder: Surface morphology and wettability effects*. Ultrasonics Sonochemistry (**IF: 9.7**), Volume 106, pp. 106875, 2024.

- [16] Y. Lin, E. Kadivar, O. el Moctar, T.E. Schellin, *Experimental investigation of partial and cloud cavitation control on a hydrofoil using bio-inspired riblets*. *Physics of Fluids* (**IF: 4.6**), Volume 36, pp. 053338, 2024.
- [17] S. Rezaee, E. Kadivar, O. el Moctar, *The role of sawtooth-shaped nano riblets on nanobubble dynamics and collapse-induced erosion near solid boundary*. *Journal of Molecular Liquids* (**IF: 6**), Volume 405, pp. 124947, 2024.
- [18] M. Sadri, E. Kadivar, O. el Moctar, *Numerical simulation of cavitation control around a circular cylinder using porous surface by volume penalized method*. *Journal of Marine Science and Engineering* (**IF: 2.9**), Volume 12(3), pp. 423, 2024.
- [19] S. Rezaee, E. Kadivar, O. el Moctar, *Molecular dynamics simulations of a nanobubble's collapse-induced erosion on nickel boundary and porous nickel foam boundary*. *Journal of Molecular Liquids* (**IF: 6**), Volume 397, pp. 124029, 2024.
- [20] E. Kadivar, M. Dawoodian, Y. Lin, O. el Moctar, *Experiments on Cavitation Control around a Cylinder Using Biomimetic Riblets*. *Journal of Marine Science and Engineering* (**IF: 2.9**), Volume 12(2), pp. 293, 2024.
- [21] H.A. Kamali, M. Pasandideh fard, E. Kadivar, *Analyzing the influence of dimensions of the body behind the cavitator on ventilated cavitation*. *Physics of Fluids* (**IF: 4.6**), Volume 36, pp. 063311, 2024.
- [22] S.K. Singh, P.S. Duth, P. Kumar, E. Kadivar, O. el Moctar, *Experimental investigation of the cavitation control in a convergent-divergent nozzle using air injection*. *Physics of Fluids* (**IF: 4.6**), Volume 36, pp. 113348, 2024.
- [23] N. Saleki-Haselghoubi, A. Dadvand, S. Rasouli, E. Kadivar, *Droplet generation by the oscillation of two spark-generated bubbles near a confined opening*. *Engineering Analysis with Boundary Elements* (**IF: 4.2**), Volume 159, pp. 213-228, 2024.
- [24] E. Kadivar, Y. Lin, O. el Moctar, *Experimental investigation of the effects of cavitation control on the dynamics of cavitating flows around a circular cylinder*. *Journal of Ocean Engineering* (**IF: 5.5**), Volume 286, pp. 115634, 2023.
- [25] M. Ghoohestani, S. Rezaee, E. Kadivar, O. el Moctar, *Thermodynamic effects on nanobubble's collapse-induced erosion using molecular dynamic simulation*. *Physics of Fluids* (**IF: 4.98**), Volume 35, pp. 073319, 2023.
- [26] Y. Lin, E. Kadivar, O. el Moctar, *Experimental Study of the Cavitation Effects on Hydrodynamic Behavior of a Circular Cylinder at Different Cavitation Regimes*. *Fluids* (**IF: 1.93**), Volume 8 (6), pp. 162, 2023.
- [27] E. Kadivar, A. Rajabpour, O. el Moctar, *Nanobubble collapse induced erosion near flexible and rigid boundaries: A molecular dynamics study*. *Fluids* (**IF: 1.93**), Volume 8 (5), pp. 154, 2023.
- [28] M. Ghoohestani, S. Rezaee, E. Kadivar, M.A. Esmailbeig, *Reactive-dynamic characteristic of a nanobubble collapse near a solid boundary using molecular dynamic simulation*. *Physics of Fluids* (**IF: 4.98**), Volume 35, pp. 022003, 2023.
- [29] M. Sadri, E. Kadivar, *Numerical investigation of the cavitating flow and the cavitation-induced noise around one and two circular cylinders*. *Journal of Ocean Engineering* (**IF: 5.5**), Volume 260, pp. 114178, 2023.
- [30] E. Kadivar, O. el Moctar, H. Sagar, *Experimental study of the influence of mesoscale surface structuring on single bubble dynamics*. *Journal of Ocean Engineering* (**IF: 5.5**), Volume 260, pp. 111892, 2022.

- [31] Y. Lin, E. Kadivar, O. el Moctar, J. Neugebauer, T.E. Schellin, *Experimental investigation on the effect of fluid-structure interaction on unsteady cavitating flows around flexible and stiff hydrofoils*. *Physics of Fluids* (**IF: 4.98**), Volume 34, pp. 083308, 2022.
- [32] T-H. Phan, E. Kadivar, V-T. Nguyen, O. el Moctar, W-G. Park, *Thermodynamic effects on single cavitation bubble dynamics under various ambient temperature conditions*. *Physics of Fluids* (**IF: 4.98**), Volume 34, pp. 023318, 2022.
- [33] E. Kadivar, T. Ochiai, Y. Iga, O. el Moctar, *An experimental investigation of the cavitation control on a hydrofoil using hemispherical vortex generators*. *Journal of Hydrodynamics* (**IF: 3.4**), Volume 33, pp. 1139-1147, 2021.
- [34] E. Kadivar, O. el Moctar, R. Skoda, U. Löschner, *Experimental study of the control of cavitation-induced erosion created by collapse of single bubbles using a micro structured riblet*. *Wear* (**IF: 6.1**), Volume 486-487, pp. 204087, 2021.
- [35] E. Kadivar, T-H. Phan, W-G. Park, O. el Moctar, *Dynamics of a single cavitation bubble near a cylindrical rod*. *Physics of Fluids* (**IF: 4.98**), Volume 33, Issue 6, pp. 113315, 2021.
- [36] E. Kadivar, E. Kadivar, S.M. Javadpour, *Numerical investigation of the transition prediction and comparison with experimental data for flow around 6:1 prolate spheroid*. *Journal of Marine Science and Application*, (**IF: 1.9**), Volume 20, pp. 46-54, 2021.
- [37] E. Kadivar, M.V. Timoshevskiy, M. Yu. Nichik, O. el Moctar, T.E. Schellin, K.S. Pervunin, *Control of unsteady partial and cloud cavitations in marine engineering and hydraulic systems*. *Physics of Fluids* (**IF: 4.98**), Volume 32, pp. 052108, 2020.
- [38] E. Kadivar, M.V. Timoshevskiy, K.S. Pervunin, O. el Moctar, *Cavitation control using Cylindrical Cavitating-bubble Generators (CCGs): Experiments on a benchmark CAV2003 hydrofoil*. *International Journal of Multiphase Flow* (**IF: 4.04**), Volume 125, pp. 103186, 2020.
- [39] E. Kadivar, M.V. Timoshevskiy, K.S. Pervunin, O. el Moctar, *Experimental and numerical study of the cavitation surge passive control around a semi-circular leading-edge flat plate*. *Journal of Marine Science and Technology* (**IF: 2.7**), Volume 25, pp. 1010-1023, 2020.
- [40] E. Kadivar, M.V. Timoshevskiy, K.S. Pervunin, O. el Moctar, *Experimental investigation of the passive control of unsteady cloud cavitation using miniature vortex generators (MVGs)*. *IOP Conference Series: Earth and Environmental Science* (**IF: 0.7**), Volume 405, pp. 012002, 2019.
- [41] E. Kadivar, O. el Moctar, K. Javadi, *Stabilization of cloud cavitation instabilities using Cylindrical Cavitating-bubble Generators (CCGs)*. *International Journal of Multiphase Flow* (**IF: 4.04**), Volume 115, pp. 108-125, 2019.
- [42] E. Kadivar, Moctar, O., Javadi, K, *Investigation of the effect of cavitation passive control on the dynamics of unsteady cloud cavitation*. *Journal of Applied Mathematical Modelling* (**IF: 5.3**), Volume 64, pp 333-356, 2018.
- [43] E. Kadivar, E. Kadivar, *Computational study of the laminar to turbulent transition over the SD7003 airfoil in ground effect*. *Journal of Thermophysics and Aeromechanics* (**IF: 1.14**), Volume 25, 2018.
- [44] E. Kadivar, O. Moctar, *Boundary layer instability control in the unsteady cloud cavitating flow*. *Journal of IOP Conference Series Earth and Environmental Science* (**IF: 0.7**), 2018.

- [45] Ebrahim. Kadivar, Erfan. Kadivar, K. Javadi, S.M. Javadpour, *The investigation of natural super-cavitation flow behind three-dimensional cavitators: Full Cavitation Model*. Journal of Applied Mathematical Modelling (**IF: 5.3**), Volume 45, pp 165-178, 2017.
- [46] S. Farahat, S.M. Javadpour, H.E. Hamidi and E. Kadivar, *Optimization of a supersonic wind tunnel diffuser using genetic algorithm*. Journal of Engineering Computations (**IF: 1.59**), Volume 32, Issue 6, pp. 1691-1707, 2015.

#### BOOK CHAPTER

- [47] E. Kadivar, T.H. Phan, W.G. Park, O. el Moctar, *Numerical and experimental investigation of the dynamics of a single bubble adjacent to a flat plate and a cylindrical rod with varying radii*. Book: Contemporary Perspective on Science, Technology and Research, Volume 4, B P International, pp. 121-151. ISBN: 978-81-969800-3-0, 2024.
- [48] E. Kadivar, A. Rajabpour, O. el Moctar, *Molecular Dynamics Simulations of Nanobubble Collapse Near Different Boundaries*. Book: Advances and Challenges in Science and Technology Vol. 3. B P International, pp. 167-188. ISBN: 978-81-19761-05-0, 2023.
- [49] Lin, Y., E. Kadivar, O. Moctar, *Experimental Study of the Cavitation Effects on Hydrodynamic Behavior of a Circular Cylinder at Different Cavitation Regimes*, Book: Numerical Modeling and Experimental Studies of Two-Phase Flows. MDPI. Fluids. ISBN978-3-7258-2135-8, 2023.

#### CONFERENCE PAPERS

- [50] Y. Lin, E. Kadivar, O. el Moctar, *Analysis of Unsteady Cavitation Dynamics Around a Hydrofoil with and without Cavitation Control Method by Using Spectral Proper Orthogonal Decomposition*. IAHRWG2025, accepted, 2025.
- [51] S. Rezaee, E. Kadivar, O. el Moctar, *Free Collapse of Cavitation Nanobubbles Using Novel Molecular Dynamics Based Algorithms*. 36th Symposium on Naval Hydrodynamics Busan, Korea, submitted.
- [52] E. Kadivar, O. el Moctar, *Effects of biomimetic meso-structured boundary on the dynamics of single cavitation bubble*. 36th Symposium on Naval Hydrodynamics Busan, Korea, submitted.
- [53] Y. Lin, E. Kadivar, O. el Moctar, *Decomposition of unsteady cavitation around a hydrofoil with and without passive control method using spectral proper orthogonal decomposition*. International Cavitation Symposium CAV2024, accepted, 2024.
- [54] S. Rezaee, E. Kadivar, O. el Moctar, *Nanobubble collapse dynamics near a porous nickel foam surface: A molecular dynamics study*. International Cavitation Symposium CAV2024, accepted, 2024.
- [55] Y. Lin, E. Kadivar, O. el Moctar, J. Neugebauer, *Hydroelasticity effects on cavitating flows around hydrofoils considering passive flow control methods*. 9. Workshop Kavitation, November 2023, Kloster Druebeck, Germany.
- [56] M. Ghoohestani, S.Rezaee, E. Kadivar, O. el Moctar, *Thermodynamic effects on nanobubble's collapse-induced erosion*. 9. Workshop Kavitation, November 2023, Kloster Druebeck, Germany.
- [57] E. Kadivar, T-H. Phan, V-T. Nguyen, W-G. Park, O. el Moctar, *Experimental and numerical investigation of thermodynamic effects on single cavitation bubble dynamics*. International Workshop Multiphase 2022, Wageningen, The Netherlands - 21- 23 September 2022.

- [58] E. Kadivar, O. el Moctar, H. Sagar, *Influence of mesoscale surface structuring on single bubble dynamics*. Seminar-Cavitation, Georg-August University Göttingen, Göttingen, 2022.
- [59] T-H. Phan, E. Kadivar, V-T. Nguyen, O. el Moctar, W-G. Park, *Study on dynamic behaviors of a single cavitation bubble near a cylindrical rod*. Proceedings of the 2021 Fall Conference of the Korea Computational Fluid Engineering Society, 2021.
- [60] E. Kadivar, T. Ochiai, K. Sugaya, Y. Iga, O. el Moctar, *Mitigation of Pressure Pulsation Induced by Transition Cavitation on a Benchmark Hydrofoil Using a Passive Control Method*. 41st International Conference on Ocean, Offshore and Arctic Engineering (OMAE 2022), Abstract Accepted, 2021.
- [61] E. Kadivar, *Cavitation Control of Sheet and Unsteady Cloud Cavitation Using Miniature Vortex Generator (MVG)*. Workshop Kavitation, Vom Modell zur Anwendung 1. December 2021, Kloster Druebeck, Germany.
- [62] T. Ochiai, E. Kadivar, K. Sugaya, J. Okajima, Y. Iga, *Active and Passive Control of Unsteady Cavitation on a Hydrofoil*. 17th international conference on fluid dynamics, Sendai, Miyagi, October 2020.
- [63] Y. Lin, E. Kadivar, S. Toedter, J. Neugebauer, O. el Moctar, *Experimental investigations of non-cavitating and unsteady cavitating flows around rigid and flexible hydrofoils*. 11th International Symposium on Cavitation (CAV) 2021 Daejeon, Korea, Accepted, November 2020.
- [64] E. Kadivar, T. Ochiai, Y. Iga, O. el Moctar, *Experimental Investigation on the Suppression of the Supercavity Fluctuation around a Hydrofoil Using Micro-Ramp Vortex Generators*. 11th International Symposium on Cavitation (CAV) 2021 Daejeon, Korea, Accepted, November 2020.
- [65] E. Kadivar, M. Timoshevskiy, K.S. Pervunin, O. el Moctar, *Control of Incipient Cavitation on a Benchmark Hydrofoil Using a Miniature Vortex Generator*. 11th International Symposium on Cavitation (CAV) 2021 Daejeon, Korea, Accepted, November 2020.
- [66] E. Kadivar, M. Timoshevskiy, K.S. Pervunin, O. el Moctar, *Experimental study of cloud cavitation control using cavitating-bubble generator (CG)*. 14th International Conference on Hydrodynamics, Rome, Italy, Accepted, 2020.
- [67] E. Kadivar, M. Timoshevskiy, K.S. Pervunin, O. el Moctar, *Experimental investigation of the passive control of unsteady cloud cavitation using miniature vortex generators (MVGs)*. IAHR International Workshop on Cavitation and Dynamic Problems in Hydraulic Machinery and Systems, Stuttgart, Germany, 2019.
- [68] E. Kadivar, O. Moctar, *Boundary layer instability control in the unsteady partial cavitation regime using Cavitation bubble Generators (CGs)*. Workshop on Cavitation Exploitation, September 2018, Ljubljana, Slovenia.
- [69] E. Kadivar, O. Moctar, *The investigation of cloud cavitation passive control around a hydrofoil using Cavitating-bubble Generators (CGs)*. The 10th International Symposium on Cavitation (CAV2018), Baltimore, USA, 2018.
- [70] E. Kadivar, O. Moctar, *Boundary layer instability control in the unsteady cloud cavitating flow*. 29th IAHR Symposium on Hydraulic Machinery and Systems, Kyoto, Japan, 2018.

- [71] E. Kadivar, Javadi, K, *Effect of cavitating-bubble generators on the dynamics of unsteady cloud cavitation*. The 19th Marine Industries Conference (MIC2017), Kish Island, Iran, 2017.
- [72] E. Kadivar, *Numerical simulation of the transitional flow over the SD7003 airfoil in ground effect*. Conference of Computational Methods in Engineering and Health Sciences, Manipal, India, December 17 - 19, 2014.
- [73] E. Kadivar, *Numerical investigation of the transition prediction for flow around an Ellipsoid*. Conference of Computational Methods in Engineering and Health Sciences, Manipal, India, December 17 - 19, 2014.
- [74] E. Kadivar, *Numerical investigation of transitional flow over different wind turbine airfoils using OpenFOAM*. Research Report, Ostfalia University, March, 2015.
- [75] E. Kadivar, *Computational study of the laminar to turbulent transition of pitching and plunging airfoil*. Research Report, Ostfalia University, January, 2015.
- [76] E. Kadivar, *Numerical modelling of guide vanes for minimization of the pressure loss in subsonic wind tunnel using turbomachinery code MISES*. Research Report, Ostfalia University, November, 2014.
- [77] E. Kadivar, *Velomobile shape optimization for aerodynamic drag reduction (Part II)*. Research Report, Externally Funded Project, Ostfalia University, Wolfenbüttel, August, 2014.
- [78] E. Kadivar, *Velomobile shape optimization for aerodynamic drag reduction (Part I)*. Research Report, Externally Funded Project, Ostfalia University, Wolfenbüttel, May, 2014.

#### AWARDS

- Georg Weinblum Award from German Society for Maritime Technology (for PhD Dissertation), 2022.
- Award (Dr Shahriari's Award), Iran's National Elites Foundation, 2021.
- Postdoctoral Fellowship (Investigation of laser-induced cavitation bubble, University of Duisburg-Essen, 2020).
- Research Scholarship (Investigation of the cavitation passive control, University of Duisburg-Essen, 2018).
- Research Scholarship (Cavitation modelling with different turbulence models URANS, PANS and LES, University of Duisburg-Essen, 2017).

#### INVITED RESEARCHER AND EDITORIAL BOARD

1. Editorial Board, Journal of Modares Mechanical Engineering (ISSN 1027-5940), Tarbiat Modares University. 2025-now.
2. Guest Editor, International Journal of Molecular Sciences (IF 4.9, Q1), Special Issue of Molecular Dynamics Simulations of Nanobubble for Different Applications", 2024-2025.
3. Guest Editor, Journal of Marine Science and Engineering (IF 2.7, Q1), Special Issue of Cavitation Control in Marine Engineering: Modelling and Experiment", 2024-2025.
4. Guest Editor, Journal Fluids (IF 1.8, Q2), Special Issue of "Bubble Dynamics", 2023.
5. Invited Researcher, Pusan National University, South Korea, 2022.
6. Invited Researcher, Institute of Fluid Science (IFS), Tohoku University, Japan, 2020.
7. Invited Researcher, Kutateladze Institute of Thermophysics, Russian Academy of Sciences, Novosibirsk, 2019.

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