VAN TU NGUYEN, PhD – Research Professor

Name: Van Tu Nguyen

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Affiliation: School of Mechanical Engineering, Pusan National University, South Korea

EDUCATION

2011-2017:   Ms & PhD, School of Mechanical Engineering (SME), Pusan National University (PNU), South Korea
Thesis: "*Development of Numerical Methods for Multiphase Flows: Applications to Free-Surface Flow and Water Impact Problems*"

2005-2010:   B.E, University of Engineering and Technology, Vietnam National University, Hanoi, Vietnam

EXPERIENCE

2020-Present: Research Professor – Principal Investigator - Advisor, School of Mechanical Engineering (SME), Pusan National University (PNU), South Korea

2017-2020:   Post-doctoral Researcher, SME, PNU, South Korea

2011-2017:   Graduate Researcher, SME, PNU, South Korea

2010-2011:   Researcher, Institute of Mechanics, Vietnam Academy of Science and Technology, Vietnam

GRANT

[8] National Research Fund of Korea (NRF) Basic Science and Research (210,000,000 KRW~$160,000), June. 2023 - May. 2026

Role: *Principal Investigator*; Grant No. RS-2023-00248051

[7] NRF Basic Science and Research (195,000,000 KRW), June. 2020 - May. 2023

Role: *Principal Investigator*; Grant No. 2020R1I1A1A01072475

[6] Office of Naval Research (ONR) ($240,000)), Sep. 2023 - Aug. 2026

Role: *Co-Principal Investigator*; Grant Proposal #6000015040 GRANT13866044

[5] NRF Basic Science and Research (400,000,000 KRW), June. 2023 - May. 2027

Role: *Key Participant*; Grant No. RS-2023-00248070

[4] NRF, International Research & Development Program (25,000,000 KRW), Jan. 2022 - Dec. 2023

Key Participant. Grant No. 2022K2A9A2A22000080

[3] NRF, Basic Science and Research (150,000,000 KRW), June. 2020 - May. 2023 Publications

Key Participant. Grant No. 2020R1I1A3067229

[2] NRF, Basic Science and Research (150,000,000 KRW), June. 2020 - May. 2023 Publications

Key Participant. Grant No. 2020R1I1A1A01071163

[1] NRF, Basic Science and Research (270,000,000 KRW), March. 2018 - Feb. 2021

Key Participant. Grant No. 2018R1A2B6008864

AWARD

2019 – 2020: Postdoctoral fellowship award for a postdoctoral researcher, School of Mechanical Engineering, Pusan National University.

2017 – 2019: BK fellowship award for a postdoctoral researcher, Brain Korea 21 Plus Program, Korea Government.

2011 – 2016: BK Scholarship for graduate students, Brain Korea 21 & 21 Plus Program, Korea Government.

2009: Third Prize in Student Researching contest, University of Engineering and Technology, VNU Hanoi.

PROFESSIONAL ACTIVITIES

- **Professional Memberships**

  - Associate Editor of AIP Advances - American Institute of Physics (AIP) Publishing LLC (SCIE, IF = 1.6, Q2 (SJR), Q4 (JCR))

  - Guest Editor of a special issue in Fluids (IF = 1.9, Journal indexed in Scopus, ESCI - Web of Science).

  - Editorial Board Member: Subsea Engineering and Technology, HongKong.

  - Section Editor in Mechanical Engineering Sciences for Current Engineering Letters and Reviews, the journal of Bentham Science.

  - Editorial Member: Mechanical Engineering Advances

  - Contribute as a Reviewer of 15+ SCIE Journals.

- **Section Chair**

  - 76th Annual Meeting of the APS Division of Fluid Dynamics, Sunday–Tuesday, November 19–21, 2023; Washington, DC, USA.

  - Proceedings of the 8th World Congress on Mechanical, Chemical, and Material Engineering (MCM'22), Prague, Czech Republic – July 31, 2022 - August 02, 2022

  - 13th Asian Computational Fluid Dynamics Conference – Oct 16-19, 2022, JeJu Island, Korea

- **Presenter/ Speaker**

  - Keynote speaker: - The 11th International Conference on Mechanical Science and Engineering (ICMSE2023)

  - Invited speaker: - The Second International Conference On Mechanics, Oct. 15th-18th 2018, Silks Place, Yilan, Taiwan.

  - International Mechanical Engineering Congress & Exposition IMECE2013, USA

  - 76th Annual Meeting of the APS Division of Fluid Dynamics, Sunday–Tuesday, November 19–21, 2023; Washington, DC, USA.

  - Proceedings of the 8th World Congress on Mechanical, Chemical, and Material Engineering (MCM'22), Prague, Czech Republic – July 31, 2022 - August 02, 2022

  - 13th Asian Computational Fluid Dynamics Conference – Oct 16-19, 2022, JeJu Island, Korea

  - 10th Asian Computational Fluid Dynamics Conference, Oct. 19-23, Korea

- Proceedings of the ASME-JSME-KSME Joint Fluids Engineering Conference 2015 AJK2015-FED, KOREA

- 11th Asian Computational Fluid Dynamics Conference, 2016, China.

- The 5th International Conference on Engineering Mechanics and Automation (ICEMA 5), 2019, VietNam

- CAV2021-11th International Symposium on Cavitation 2021, Korea

- 11 presentations at the Korean Society for Computational Fluids Engineering Conference (KSCFE), from 2011 to present

- 3 presentations at The Korean Society of Mechanical Engineers Conference (KSME) Conference, Korea

- 9th National Congress of fluid engineering, 10, 2016, 9NCFE,EXCO, Korea.

- ONR Propulsion Hydromechanics & Propulsion Hydrodynamics Review and the Workshop on Cavitation-Resistant Materials and Coatings on July 24, 2024, at the FedEx Institute of Technology in the University of Memphis, Tennessee, USA.

✚ Supervisor/Teaching/ Mentoring Experiences

- **Co-supervisor:**

  - Seong-Ho Park, PhD student [Pusan National University, 2022/03-Present]

  - Cheong-Gu Kang, Ms student [Pusan National University, 2022/03-Present]

- **Mentoring Assistant**

  - Thanh-Hoang Phan, PhD [Pusan National University, Graduated 02/2020] - Dissertation: "Numerical analysis of compressible multiphase flows: Applications to film boiling, condensation, and underwater explosion problems"

  - Van-Dat Thang, PhD [Pusan National University, Finished course works 2019/02]

  - Hyon-Seong Hwang , MS [Pusan National University, Graduated 2022/02]

  - Quang-Thai Nguyen, PhD [Pusan National University, 2020/03-Present]

- **Teaching:**

  - 2021-2022 External course: Computational Fluid Dynamics - Using coding program and performing simulations of multiphase flows

PUBLICATIONS

- 80+ international journal SCI (E) and international/domestic conference papers.

- 20+ papers in the top journals rank Q1 (International Journal of Mechanical Sciences, Physics of Fluids, International Journal of Heat and Mass Transfer, Ocean Engineering, …)

- Google Scholar: Citation: 850+, H-index: 19, i10-index: 25.

- **Ranked 3rd in South Korea and 19th globally researcher among top 500 researchers** who have highest impact and contributions for research topics related to **Underwater Explosion; Shock Wave**, according to SciVal (2020-2024), provided by Elsevier.

- **Ranked 5th in South Korea and 176th globally researcher among top 500 researchers** who have highest impact and contributions for research topics related to Hydrofoil; Numerical Model; **Computational Fluid Dynamics (CFD),** according to SciVal (2020-2024), provided by Elsevier.

♣ Research pages:

♣ SCI papers:

[35] Park S-H, **Nguyen V-T**, Park W-G. Numerical investigation on supercavitation hydrodynamics of high-speed water entry projectiles under effect of different head shapes. Ocean Eng. 2024;311:118926.

[34] **Nguyen V-T**, Sagar HJ, el Moctar O, Park W-G. Understanding cavitation bubble collapse and rebound near a solid wall. Int J Mech Sci. 2024:109473.

[33] Han D-W, Park S-H, Duy-Trong N, **Nguyen V-T**, Sagar H, Moctar OE, et al. Dynamics of a single cavitation bubble near a cylindrical blind hole. Ocean Engineering. 2024;311:118890.

[32] **Nguyen V-T**, Phan T-H, Park S-H, Duy T-N, Nguyen Q-T, Park W-G. Numerical study of shock waves and supersonic jets triggered by cavitation bubble collapse in different pressurized ambiences. Journal of Mechanical Science and Technology. 2024;38:4167-73.

[31] Phan T-H, **Nguyen V-T**, Duy T-N, Park W-G. Numerical study on laser-induced cavitation bubble dynamics inside a millimetric droplet. Phys Fluids. 2024;36.

[30] Park S-H, Phan T-H, **Nguyen V-T**, Duy T-N, Nguyen Q-T, Park W-G. Numerical simulation of wall shear stress and boundary layer flow from jetting cavitation bubble on unheated and heated surfaces. Int J Heat Mass Tran. 2024;222:125189.

[29] **Nguyen V-T**, Phan T-H, Park W-G. Modeling of shock wave produced by collapse of cavitation bubble using a fully conservative multiphase model. Phys Fluids. 2023;35:116102.

[28] T-N Duy, **V-T Nguyen**, T-H Phan, Q-T Nguyen, S-H Park, W-G Park, Numerical study of bubble dynamics near a solid wall with a gas-entrapping hole, Ocean Engineering,Volume 285, Part 1, 2023, 115344, ISSN 0029-8018, https://doi.org/10.1016/j.oceaneng.2023.115344.

[27] Q-T Nguyen, **V-T Nguyen** (Corresponding author), T-H Phan, T-N Duy, S-H Park, and W-G Park, "Numerical study of dynamics of cavitation bubble collapse near oscillating walls", Physics of Fluids 35, 013306 (2023) https://doi.org/10.1063/5.0132049

[26] **V.-T. Nguyen**, and W.-G. Park, "A Review of Preconditioning and Artificial Compressibility Dual-Time Navier–Stokes Solvers for Multiphase Flows," Fluids **8**, 100 (2023).

[25] **V.-T. Nguyen**, T.-H. Phan, T.-N. Duy, and W.-G. Park"Unsteady cavitation around submerged and water-exit projectiles under the effect of the free surface: A numerical study," Ocean Eng 263, 112368 (2022).

[24] T.-N. Duy, **V.-T. Nguyen**, T.-H. Phan, D.-H. Kim, and W.-G. Park, "A free surface flow solver based on an efficient improvement to a coupling method for interface computations," Computers & Mathematics with Applications, vol. 124, pp. 21-41, 2022/10/15/ 2022. https://doi.org/10.1016/j.camwa.2022.08.020

[23] T.-N. Duy, **V.-T. Nguyen**, T.-H. Phan, H.-S. Hwang, and W.-G. Park, "Numerical analysis of ventilated cavitating flow around an axisymmetric object with different discharged temperature conditions," International Journal of Heat and Mass Transfer, vol. 197, p. 123338, 2022/11/15/ 2022. [

[22] T.-N. Duy, **V.-T. Nguyen**, and W.-G. Park, "Numerical investigation on influences of injection flow rate on bubbling flow at submerged orifices," European Journal of Mechanics - B/Fluids, vol. 95, pp. 23-37, 2022/09/01/ 2022.

[21] **V.-T. Nguyen** and W.-G. Park, "Numerical study of the thermodynamics and supercavitating flow around an underwater high-speed projectile using a fully compressible multiphase flow model," Ocean Engineering, vol. 257, p. 111686, 2022/08/01/ 2022.

[20] T.-H. Phan, **V.-T. Nguyen**, T.-N. Duy, D.-H. Kim, and W.-G. Park, "Influence of phase-change on the collapse and rebound stages of a single spark-generated cavitation bubble," International Journal of Heat and Mass Transfer, vol. 184, p. 122270, 2022/03/01/ 2022.

[19] T.-H. Phan, E. Kadivar, **V.-T. Nguyen**, O. el Moctar, and W.-G. Park, "Thermodynamic effects on single c

avitation bubble dynamics under various ambient temperature conditions," Physics of Fluids, vol. 34, no. 2, p. 0 23318, 2022/02/01 2022.

[18] **V.-T. Nguyen**, T.-H. Phan, T.-N. Duy, D.-H. Kim, and W.-G. Park, "Modeling of the bubble collapse with water jets and pressure loads using a geometrical volume of fluid based simulation method," International Journ al of Multiphase Flow, vol. 152, p. 104103, 2022/07/01/ 2022.

[17] **V.-T. Nguyen**, T.-H. Phan, T.-N. Duy, D.-H. Kim, and W.-G. Park, "Fully compressible multiphase model for computation of compressible fluid flows with large density ratio and the presence of shock waves," Compute rs & Fluids, vol. 237, p. 105325, 2022/04/15/ 2022.

[16] T.-H. Phan, J.-G. Shin, **V.-T. Nguyen**, T.-N. Duy, and W.-G. Park, "Numerical analysis of an unsteady nat ural cavitating flow around an axisymmetric projectile under various free-stream temperature conditions," Intern ational Journal of Heat and Mass Transfer, vol. 164, p. 120484, 2021/01/01/ 2021.

[15] T.-H. Phan, **V.-T. Nguyen**, T.-N. Duy, D.-H. Kim, and W.-G. Park, "Numerical study on simultaneous ther modynamic and hydrodynamic mechanisms of underwater explosion," International Journal of Heat and Mass T ransfer, vol. 178, p. 121581, 2021/10/01/ 2021.

[14] **V.-T. Nguyen**, T.-H. Phan, and W.-G. Park, "Numerical modeling of multiphase compressible flows with t he presence of shock waves using an interface-sharpening five-equation model," International Journal of Multip hase Flow, vol. 135, p. 103542, 2021/02/01/ 2021.

[13] **V.-T. Nguyen**, T.-H. Phan, T.-N. Duy, and W.-G. Park, "3D simulation of water entry of an oblique cylind er with six-degree-of-freedom motions using an efficient free surface flow model," Ocean Engineering, vol. 220, p. 108409, 2021/01/15/ 2021.

[12] **V.-T. Nguyen**, T.-H. Phan, T.-N. Duy, and W.-G. Park, "Numerical modeling for compressible two-phase f lows and application to near-field underwater explosions," Computers & Fluids, vol. 215, p. 104805, 2021/01/30 / 2021.

[11] T.-N. Duy, **V.-T. Nguyen**, T.-H. Phan, and W.-G. Park, "An enhancement of coupling method for interface computations in incompressible two-phase flows," Computers & Fluids, vol. 214, p. 104763, 2021/01/15/ 2021.

[10] T.-H. Phan, **V.-T. Nguyen**, and W.-G. Park, "Numerical study on strong nonlinear interactions between spa rk-generated underwater explosion bubbles and a free surface," International Journal of Heat and Mass Transfer, vol. 163, p. 120506, 2020/12/01/ 2020.

[9] **V-T Nguyen,** Phan T-H, Park W-G. Modeling and numerical simulation of ricochet and penetration of water entry bodies using an efficient free surface model. Int J Mech Sci. 2020;182:105726.

[8] **V-T Nguyen,** Nguyen NT, Phan T-H, Park W-G. Efficient three-equation two-phase model for free surface a nd water impact flows on a general curvilinear body-fitted grid. Comput Fluids, 2020; 104324.

[7] Phan T-H**, Nguyen V-T**, Park W-G. Numerical study on dynamics of an underwater explosion bubble based on compressible homogeneous mixture model. Comput Fluids. 2019;191:104262.

[6] **V-T Nguyen,** V-D Thang, W-G Park, A novel sharp interface capturing method for two- and three-phase inc ompressible flows, Computers & Fluids, Volume 172, 2018, Pages 147-161, ISSN 0045-7930, https://doi.org/10 .1016/j.compfluid.2018.06.020.

[5] **V-T Nguyen** and W-G Park, Enhancement of Navier–Stokes solver based on an improved volume-of-fluid method for complex interfacial-flow simulations, Applied Ocean Research, Volume 72, 2018, Pages 92-109, IS SN 0141-1187, https://doi.org/10.1016/j.apor.2018.01.007.

[4] **V-T Nguyen** and W-G Park, A volume-of-fluid (VOF) interface-sharpening method for two-phase incompre ssible flows, Computers & Fluids, Volume 152, 2017, Pages 104-119, ISSN 0045-7930, http://dx.doi.org/10.101 6/j.compfluid.2017.04.018.

[3] **V-T Nguyen**, D-T Vu, W-G Park, C-M Jung, Navier–Stokes solver for water entry bodies with moving Chi mera grid method in 6DOF motions, Computers & Fluids, Volume 140, 25 November 2016, Pages 19-38, ISSN 0045-7930, http://dx.doi.org/10.1016/j.compfluid.2016.09.005.

[2] **V-T Nguyen** and W-G Park, A free surface flow solver for complex three-dimensional water impact proble ms based on the VOF method. Int. J. Numer. Meth. Fluids, 82: 3–34 (2016), ISSN: 1097-0363. doi: 10.1002/fld. 4203.

[1] **V-T Nguyen**, D-T Vu, W-G Park, Y-R Jung, Numerical analysis of water impact forces using a dual-time ps eudo-compressibility method and volume-of-fluid interface tracking algorithm, Computers & Fluids, Volume 10

3, 1 November 2014, Pages 18-33, ISSN 0045-7930, http://dx.doi.org/10.1016/j.compfluid.2014.07.007

✛ International/ domestic papers:

[2] **Nguyen, V.-T**.; Park, W.-G. A Review of Preconditioning and Artificial Compressibility Dual-Time Navier–Stokes Solvers for Multiphase Flows. Fluids 2023, 8, 100.

[1] C.G. Kang,, T.H. Phan, **V.T. Nguyen**, W.G. Park, Numerical analysis of bubble collapse attached to wall with stand-off distance, Journal of computational fluids engineering, 30 June 2024. pp. 1-12.

✛ International Conference papers:

[28] **Van-Tu Nguyen**, Hemant J Sagar, Thanh-Hoang Phan, Trong-Nguyen Duy, Seong-Ho Park, Quang-Thai Nguyen, Ould e Moctar, Warn-Gyu Park, Shock wave and temperature induced by bubble collapse and rebound: Numerical and experimental study, 76th Annual Meeting of the Division of Fluid Dynamics, Sunday–Tuesday, November 19–21, 2023; Washington, DC, USA.

[27] **Van-Tu Nguyen**, Thanh-Hoang Phan, Seong-Ho Park, Trong-Nguyen Duy, Quang-Thai Nguyen, Warn-Gyu ParkPark, Numerical Modeling of Shock Waves and Supersonic Jet Induced by Cavitation Bubble Collapse, the 34th International Symposium on Shock Waves (ISSW34) in Daegu, Korea, July 16-21, 2023.

[26] **Van-Tu Nguyen**, Thanh-Hoang Phan, Trong-Nguyen Duy, Warn-Gyu Park, Advancement in numerical computation of free surface flow: Applications and challenges in hydraulic and hydrodynamic system, The 4th International Conference on Transportation Infrastructure and Suistable Development (TISDIC), August 26th-28th, 2023, Danang, Vietnam

[25] Thanh-Hoang Phan, **Van-Tu Nguyen**, Trong-Nguyen Duy, Warn-Gyu Park, Numerical analysis of underwater explosion near submerged/floating structures, The 4th International Conference on Transportation Infrastructure and Suistable Development (TISDIC), August 26th-28th, 2023, Danang, Vietnam

[24] Trong-Nguyen Duy, **Van-Tu Nguyen**, Thanh-Hoang Phan,Xuan-Bach Nguyen, Quang-Minh Ngo, and Warn-Gyu Park, Numerical Study on Bubble Growth and Collapse near a Solid Wall with a Gas Entrapping Hole, International Symposium on Aircraft Technology, MRO & Operation (ISATECH), August 24-26, 2023, Hanoi, Vietnam.

[23] Seong-Ho Park, Warn-Gyu Park, **Van-Tu Nguyen**, Thanh-Hoang Phan, Quang-Thai Nguyen, Trong-Nguyen Duy, Numerical Simulations of Air Shock Bubble Interaction using Multi-fluid Models, the 34th International Symposium on Shock Waves (ISSW34) in Daegu, Korea, July 16-21, 2023.

[22]Quang-Thai Nguyen, Warn-Gyu Park, **Van-Tu Nguyen**, Trong-Nguyen Duy, Thanh-Hoang Phan, Seong-Ho Park, Numerical Investigation of Shock Wave Propagation during Single Bubble Collapse near Oscillating Walls, the 34th International Symposium on Shock Waves (ISSW34) in Daegu, Korea, July 16-21, 2023.

[21] **Van-Tu Nguyen**, Thanh-Hoang Phan, Seong-Ho Park, Trong-Nguyen Duy, Quang-Thai Nguyen, Warn-Gyu ParkPark, Numerical Modeling of Shock Waves and Supersonic Jet Induced by Cavitation Bubble Collapse, the 34th International Symposium on Shock Waves (ISSW34) in Daegu, Korea, July 16-21, 2023.

[20] Seong-Ho Park, Warn-Gyu Park, **Van-Tu Nguyen**, Thanh-Hoang Phan, Quang-Thai Nguyen, Trong-Nguyen Duy, Numerical Simulations of Air Shock Bubble Interaction using Multi-fluid Models, the 34th International Symposium on Shock Waves (ISSW34) in Daegu, Korea, July 16-21, 2023.

[19] Quang-Thai Nguyen, Warn-Gyu Park, **Van-Tu Nguyen**, Trong-Nguyen Duy, Thanh-Hoang Phan, Seong-Ho Park, Numerical Investigation of Shock Wave Propagation during Single Bubble Collapse near Oscillating Walls, the 34th International Symposium on Shock Waves (ISSW34) in Daegu, Korea, July 16-21, 2023.

[18] **Van-Tu Nguyen**, Thanh-Hoang Phan, and Warn-Gyu Park, Numerical Analyses of Cavitation Erosion Mechanism during Bubbles Collapsing under various Conditions, 13th Asian Computational Fluid Dynamics Conference – Oct 16-19, 2022, JeJu Island, Korea.

[17] Thanh-Hoang Phan, **Van-Tu Nguyen**, Trong-Nguyen Duy, Quang-Thai Nguyen, Seong-Ho Park, and Warn-Gyu ParkPark, Numerical simulation of microbubble dynamics near a surface of urinary stone under an ultrasound field, 13th Asian Computational Fluid Dynamics Conference – Oct 16-19, 2022, JeJu Island, Korea.

[16] Quang-Thai Nguyen, **Van-Tu Nguyen**, Trong-Nguyen Duy, Thanh-Hoang Phan, Warn-Gyu Park, Numerical study of single bubble luminescence using a compressible two-phase flow model, 13th Asian Computational Fluid Dynamics Conference – Oct 16-19, 2022, JeJu Island, Korea.

[15] Thanh-Hoang Phan, **Van-Tu Nguyen**, Trong-Nguyen Duy, Dong-Hyun Kim, and Warn-Gyu Park, Fully compressible multiphase model and simulation of underwater explosion and cavitation bubble dynamic behaviors, 34th Symposium on Naval Hydrodynamics,Washington, DC, USA, June 26th - July 1st, 2022

[14] Trong-Nguyen Duy, **Van-Tu Nguyen**, Thanh-Hoang Phan, Quang-Thai Nguyen, and Warn-Gyu Park, Numerical study on the ventilated cavitating flow around an object with different ejected temperatures, 13th Asian Computational Fluid Dynamics Conference – Oct 16-19, 2022, JeJu Island, Korea.

[13] **Van-Tu Nguyen**, Thanh-Hoang Phan, Donghyun-Kim, and Warn-Gyu Park, Numerical Study of Cavitation Bubble Collapse under Various Conditions, Proceedings of the 8th World Congress on Mechanical, Chemical, and Material Engineering (MCM'22), Prague, Czech Republic – July 31, 2022 - August 02, 2022, Paper No. HTFF 133, DOI: 10.11159/htff22.133.

[12] **Van-Tu Nguyen**, Thanh-Hoang Phan, Trong-Nguyen Duy, and Warn-Gyu Park, Numerical simulation of supercavitating flow around a submerged projectile near a free surface, CAV2021, 11th International Symposium on Cavitation, 2021 May 10-13, Daejon, Korea.

[11] Trong-Nguyen Duy, **Van-Tu Nguyen**, Thanh-Hoang Phan, Quang-Thai Nguyen and Warn-Gyu Park, Multiphase Flow Analysis of an Axisymmetric Body Using Improved Interface Capturing Method with a Cavitation Model, CAV2021, 11th International Symposium on Cavitation, 2021 May 10-13, Daejon, Korea.

[10] Quang-Thai Nguyen, **Van-Tu Nguyen**, Thanh-Hoang Phan, Duy-Trong Nguyen, Dong-Hyun Kim and Warn-Gyu Park, Numerical analysis of bubble dynamics near a vibrating wall (Best paper presentation Award), CSS-EEST23 - 23rd Cross-Strait Symposium on Energy and Environmental Science and Technology (2021. DEC.

[9] Thanh-Hoang Phan, **Van-Tu Nguyen**, Trong-Nguyen Duy, and Warn-Gyu Park, Numerical study on the wall pressure caused by spark-generated underwater bubble near a hemispheric boundary, CAV2021, 11th International Symposium on Cavitation, 2021 May 10-13, Daejon, Korea.

[8] **V-T Nguyen**, Phan T-H**,** and Park W-G. Modeling and simulation of free surface and water entry of bodies, The 5th International Conference on Engineering Mechanics and Automation (ICEMA 5) Hanoi, October 11÷12, 2019.

[7] T.-H. Phan, **V.-T. Nguyen**, and W.-G. Park, "Numerical analysis of nonlinear interaction between an underwater explosion bubble and a free surface," The 21st Cross Straits Symposium on Energy and Environmental Science and Technology (CSS-EEST), China, 2019. 11.26.

[6] **V-T Nguyen** and W-G Park, Numerical simulation of free surface flows: a prelimi-nary evaluation of basic solution methods, The Second International Conference On Mechanics, Oct. 15th-18th 2018, Silks Place, Yilan, Taiwan.

[5] **V-T Nguyen** and W-G Park, Advances in volume-of-fluid based simulations of 3D two-fluid flow problems including complex interfacial structures and breaking waves in engineering, 11th Asian Computational Fluid Dynamics Conference, Sept. 16-20, 2016, Dalian University of Technology, Dalain, China.

[4] **V-T Nguyen**, and W-G Park, Free surface flow solver for complex 3D water impact problems based on the VOF method, 11th Korea-Japan CFD workshop (KJCFD2015), 12, 2015, Kyushu university, Kasuga, Fukuoka 816-8580, Japan.

[3] **V-T Nguyen**, and W-G Park, 3D volume-of-fluid (VOF) based simulation of water impact problem using navier-stokes computations, Proceedings of the ASME-JSME-KSME Joint Fluids Engineering Conference 2015 AJK2015-FED July 26-31, 2015, SEOUL, KOREA

[2] **V-T Nguyen**, D-T Vu and W-G Park, 2014, 3-D Numerical Simulation of Water Entry of Free Falling Objects Using Navier-Stokes Computations and Moving Chimera Grid Scheme, 10th Asian Computational Fluid Dynamics Conference, Oct. 19-23 GRAND Hotel, Jeju, Korea.

[1] **V-T Nguyen**, C-T Ha and W-G Park, 2013, "Multiphase flow simulation of water-entry and –exit of axisymmetric bodies", Proceedings of the ASME 2013 International Mechanical Engineering Congress & Exposition IMECE2013 November 13-21, 2013, San Diego, California, USA.

✚   Domestic Conference papers:

[27] **Van-Tu Nguyen**, Nguyen-Trong Duy, Quang-Thai Nguyen, and Warn-Gyu Park, Numerical simulation of multi-bubble growth and collapse, the Korean Society for Computational Fluids Engineering Conference (KSCFE), Jeju, 2024.05.24-25.

[26] Nguyen Quang-Thai , **Van-Tu Nguyen** , Trong-Nguyen Duy , Thanh-Hoang Phan , Warn-Gyu Park, A Nu

merical Study of Bubble Behavior Near A Moving Body, 12th National Congress on Fluids Engineering, 12NCFE (KOREAN) (2022. JUNE).

[25] Trong-Nguyen Duy, **Van-Tu Nguyen**, Thanh-Hoang Phan, Quang-Thai Nguyen, Hyun-Sung Hwang, and Warn-Gyu Park, A numerical study on the bubble formation by gas injection based on a coupling method, the 12th National Congrees of Fluids Engineering 12NCFE, June 22nd -24th 2022, Changwon, Korea.

[24]**Van-Tu Nguyen**, Thanh-Hoang Phan, Dong-Hyun Kim, and Warn-Gyu Park, Numerical investigation of ventilated supercavitation of a projectile by hot exhaust gas, KSME, Gwangju, 2021.12.

[23]**Van-Tu Nguyen**, Thanh-Hoang Phan, Trong-Nguyen Duy, Dong-Hyun Kim, and Warn-Gyu Park, Numerical Simulation Of Single Bubble Collapse Using A Geometrical Vof Method, the Korean Society of Computational Fluid Engineering - KSCFE, November 11th -12th 2021, Seoul, Korea.

[22] Quang-Thai Nguyen, **Van-Tu Nguyen**, Duy-Trong Nguyen, Thanh-Hoang Phan, and Warn-Gyu Park, Numerical Analysis of Bubble Dynamics near a High-Frequency Vibrating Wall, KSCFE2021FALL 2021 (2021. 11).

[21] **Van-Tu Nguyen**, Thanh-Hoang Phan, Trong-Nguyen Duy, and Warn-Gyu Park, Numerical simulation of transonic flow around a high-speed projectile, KSME Fluid Engineering Division 2021 Spring Conference (2021. AUG).

[20] Quang-Thai Nguyen, **Van-Tu Nguyen**, Duy-Trong Nguyen, Thanh-Hoang Phan, Dong-Hyun Kim and Warn-Gyu Park, Numerical Analysis of Cavitation Bubble Collapse and Underwater Explosion using a Compressible Two-Phase Flow Model, KSME Fluid Engineering Division 2021 Spring Conference (2021. AUG).

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