

RESEARCH INTERESTS

- **Computer Graphics**
Virtual Reality, Animation, GPU Programming
- **Machine Learning**
Reinforcement Learning, Optimization Algorithm

EDUCATION

- | | |
|--|---|
| Hallym University
Ph.D. in Convergence Software, GPA: 4.50/4.50 | Chuncheon, South Korea
Sep. 2017–Aug. 2021 |
| – Dissertation: “ <i>Controllable Swarm Animation using Deep Reinforcement Learning with a Rule-based Action Generator</i> ” | |
| – Advisor: Prof. Sun-Jeong Kim | |
| Hallym University
M.Eng. in Computer Engineering, GPA: 4.38/4.50 | Chuncheon, South Korea
Mar. 2012–Feb. 2014 |
| – Thesis: “ <i>GP-GPU based Smoothed Particle Hydrodynamic Fluid Simulation</i> ” | |
| Hallym University
B.Eng. in Computer Engineering, GPA: 4.27/4.50, Rank: 2/71 | Chuncheon, South Korea
Mar. 2010–Feb. 2012 |
| – Yantai University - Hallym University Joint Program | |
| – Award: “Outstanding Graduates” | |

WORKING EXPERIENCE

- | | |
|---|---|
| Hallym University
Department of Convergence Software | Chuncheon, South Korea
Sep. 2017–Aug. 2020 |
| – Research Assistant | |
| Weifang Maternity and Child Care Hospital
Information Management Section | Weifang, China
May. 2014–Sep. 2017 |
| – Software Engineer | |
| – <i>Desktop Application Development (Qt, C#), Web Service Development (Java, NodeJS)</i> | |

SKILLS AND INTERESTS

- **Professional Skills**
C/C++, Java, Python, Unity3D, Latex, Web, PostgreSQL, Tensorflow, Pytorch
- **Languages**
Mandarin(native), Korean(fluent), English(literacy), Japanese(novice)
- **Interests**
Soccer, Kendo, History

TEACHING

- **Mentor** in *Unity Shader Programming* at Hallym University Fall 2019
- **Mentor** in *Web Application Development* in GVE Lab Winter 2018
- **Teaching Assistant** at Hallym University Spring 2013
Computer Graphics
Smartphone Programming (iOS)
- **Teaching Assistant** at Hallym University Fall 2012
Game Programming (DirectX 11)
Smartphone Programming (iOS)
- **Teaching Assistant** at Hallym University Spring 2012
Computer Programming (Java)
Data Structure

HONORS AND AWARDS

- Research Assistant Scholarship at Hallym University 2017–2020
- Teaching Assistant Scholarship at Hallym University 2012–2013
- Outstanding Graduates at Hallym University 2012
- Outstanding Performance Scholarship at Hallym University 2010, 2011

EXTRACURRICULAR ACTIVITIES

- Gangwon Foreign Student Ambassador 2019–present
- Member of Chuncheon Kendo Club 2019–present
- Member of Weifang Preventive Medicine Association 2018–present
– *Medical Statistics Division*

INTERNATIONAL PUBLICATIONS

- [1] **Z.-S. Wang**, J. Lee, C. G. Song, and S.-J. Kim, “Data-driven point sampling with blue-noise properties for triangular meshes”, in *Proceedings of the 2020 3rd International Conference on Computer Science and Software Engineering*, ser. CSSE 2020, Beijing, China, 2020, 77–82. [Best Presenter].
- [2] **Z.-S. Wang**, J. Lee, C. G. Song, and S.-J. Kim, “Efficient chaotic imperialist competitive algorithm with dropout strategy for global optimization”, *Symmetry*, vol. 12, no. 4, p. 635, 2020.
- [3] **Z.-S. Wang**, S.-W. Lee, and C. G. Song, “Unrealistic map based navigation system for pedestrian”, *Life Science Journal*, vol. 11, no. 7s, 2014.
- [4] **Z.-S. Wang**, J.-H. Choi, Y. Ko, and C. G. Song, “Using a smart phone as input device for pc”, in *Proceedings of the 2012 international Workshop on Advanced Image Technology*, ser. IWAIT 2012, Ho Chi Minh City, Vietnam, 2012, pp. 824–828.

DOMESTIC PUBLICATIONS (SOUTH KOREA)

- [1] **Z.-S. Wang**, J. Lee, C. G. Song and S.-J. Kim, “Comparison of Exploration Ability for Global Path Planning between Particle Swarm Optimization and Deep Q-network”, in *Proceedings of KIISE and KBS Joint Symposium 2018*. Yonsei University, Gangwon, Korea, Jun 1, 2018. pp. 114-117. [**Best Paper Award**]
- [2] **Z.-S. Wang**, J.-H. Kim, J.-I. Park and C. G. Song, “Implementation of Unity3D and Kinect Based Gesture Recognition Application”, in *HCI 2013 Proceeding*. High One Resort, Gangwon, Korea, Jan 30-Feb 1, 2013. pp. 659-662.
- [3] **Z.-S. Wang**, J.-H. Kim, S.-J. Kim and C. G. Song, “Archery Application in Virtual Environment”, in *Korea Computer Congress 2013*. Sangji University, Wonju, Korea, Jun 15, 2013. pp. 182-184.
- [4] J.-H. Kim, J.-I. Park, **Z.-S. Wang**, S.-J. Kim and C. G. Song, “Image Segmentation System Using 3D Histogram”, in *Proceedings of the 39th KIISE Fall Conference(C)*. Chungnam National University, Daejeon Metropolitan City, Korea, Nov 23-24, 2012. pp. 194-196.
- [5] J.-I. Park, J.-H. Kim, **Z.-S. Wang**, S.-J. Kim and C. G. Song, “An Alternative Proposal Open Weather Information by Using JSON API”, in *Proceedings of the 39th KIISE Fall Conference(D)*. Chungnam National University, Daejeon Metropolitan City, Korea, Nov 23-24, 2012. pp. 102-104.