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Jaewoo Jeong

Vocational Timeline

23.03 – **Korea Advanced Institute of Science and Technology**,
Doctoral Candidate in Mechanical Engineering.
Advisor: Prof. Kuk-Jin Yoon

21.03 – 23.02 **Korea Advanced Institute of Science and Technology**,
Masters of Science in Mechanical Engineering, *GPA – 4.01/4.30*.
Advisor: Prof. Jungchul Lee
Thesis: Computer vision-based analysis for high temperature annealing and dropwise condensation

19.05 – 20.12 **KATUSA, Republic of Korea Army**
-Served the Korean army for 19 months as a mandatory service

15.09 – 18.12 **University of Minnesota-Twin Cities**,
Bachelor of Mechanical Engineering, *GPA – 3.75/4.00*
Dean's list: 2015 Fall, 2016 Spring, 2017 Spring, 2017 Fall, 2018 Spring.

Research Area

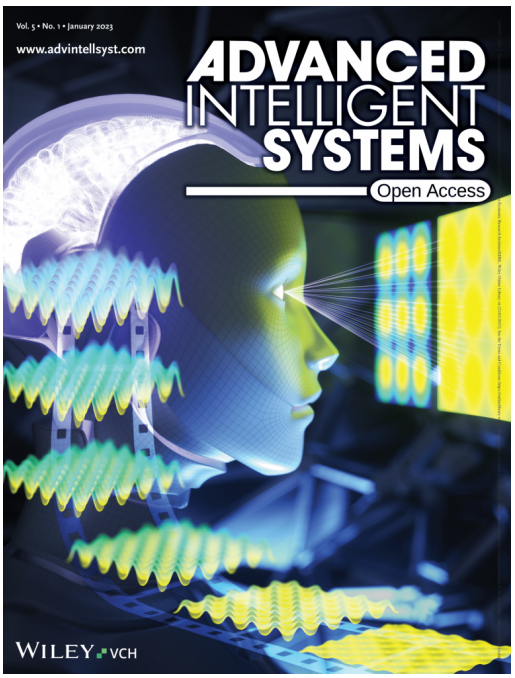
- Human Motion Forecasting & Synthesis
- Vehicle / Human Trajectory Prediction

International Conferences

4. **CVPR 2024 / Highlight (11.9% of accepted)**, **J. Jeong***, D. Park*, K. Yoon
-Multi-agent Long-term 3D Human Pose Forecasting via Interaction-aware Trajectory Conditioning / Code
3. **CVPR 2024**, D. Park, J. Jeong, S. Yoon, **J. Jeong**, K. Yoon
- T4P: Test-Time Training of Trajectory Prediction via Masked Autoencoder and Actor-specific Token Memory / Code
2. **AAAI 2023**, D. Park, **J. Jeong**, K. Yoon
-Improving Transferability for Cross-domain Trajectory Prediction via Neural Stochastic Differential Equation / Code
1. **NEMS**, M. G. Jeong, **J. Jeong**, T. Kim, B. J. Lee and J. Lee
- Near-infrared inspection and machine learning-based prediction for semiconductor membrane cavity structures

Journal Publications

5. **J. Jeong**, T. Kim, B. J. Lee, J. Lee.
"Predicting AFM topography from optical microscopes using deep-learning"
Advanced Intelligent Systems, 5, 2200317 (2022), **IF 7.4**.
- Selected as inside back cover
- Featured in multiple medias, including YTN Science Today



4. **J. Jeong**, T. Kim, J. Lee.
"Simulation of Germanium-on-Nothing cavity's morphological transformation using deep learning"
Micro and Nano Systems Letters 10, 22 (2022). **IF 3.6**

3. **J. Jeong**, T. Kim, B. J. Lee, J. Lee.
"PCA-based sub-surface structure and defect analysis for Germanium-on-Nothing using nanoscale surface topography"
Scientific Reports 12, 7205 (2022). **IF 4.6**

2. J. Ko, **J. Jeong,**, S. Son, J. Lee.
"Cellular and biomolecular detection based on suspended microchannel resonators"
Biomedical Engineering Letters 11, 367–382 (2021). **IF 4.6**

1. S.H. Park, R. Su, **J. Jeong**, S. Z. Guo K. Qiu, D. Joung, F. Meng, M. C. McAlpine.
"3D Printed Polymer Photodetectors"
Advanced Materials 30, 1803980 (2018). **IF 29.4**

Patents

23.11 Learning device, laerning method and test device, test method using the same
K. Yoon, J. Kim, **J. Jeong**/ Korean Patent, 10-2023-0168434

22.01 Anti-counterfeiting tag, method of manufacturing the anti-counterfeiting tag and anti-counterfeiting system
J. Lee, T. Kim, M. G. Jeong, **J. Jeong**, B. J. Lee / Korean Patent, 10-2022-0012563

Awards

22.06 **1st place**, *KAIST-UNIST quantitative investment competition*.
J. Jeong
-Achieved 1/40 rank in the KAIST-UNIST quantitative investment competition
-Title: Slim timeframe momentum investing with statistical augmentation / Code

22.01 **Best Poster Award**, *Nano Convergence Conference*.
J. Jeong, B. J. Lee, J. Lee
-Title: Encoder-decoder neural network and PCA-based surface inspection methodology for GON structures

21.11 **Outstanding paper award**, *Micro Nano Systems Conference*.
J. Jeong, T. Kim, B. J. Lee, J. Lee
-Title: PCA-based surface inspection methodology for Germanium-on-Nothing structures

21.11 **Bronze Award**, *KSME-SEMES Open Innovation Challenge*.
J. Lee, M. G. Jeong, T. Kim, **J. Jeong**, B. J. Lee
-Title: Fabrication of anti-counterfeiting tag with buried micro-scale patterns and its recognition methodology using multi-spectral optical inspection

17.06 – 17.08 **UROP Scholarship**, *University of Minnesota*, Advisor: Prof. Michael McAlpine.
-Received scholarship in support of summer research, resulting in publication in Advanced Materials
-Title: 3D printing polymer photodetectors

15.09 – 18.12 **Global Maroon Scholarship**, *University of Minnesota*.
-Received academic excellency scholarship for all 7 semesters during undergraduate studies

Domestic Conferences

22.11 **Nanoscientific Symposium Korea**
Oral Presentation, Invited / M. G. Jeong, T. Kim, **J. Jeong**, J. Lee
- Non-destructive testing analysis and interpretation for semiconductor thin-film-cavity structures

22.11 **Micro Nano Systems Conference**
Poster Presentation / **J. Jeong**, T. Kim, J. Lee
-Simulation of Germanium-on-Nothing cavity's morphological transformation using deep learning

22.11 **Korean Society of Mechanical Engineers**
Oral Presentation / **J. Jeong**, J. Shim, J. Lee, Y. Nam
-Computer vision-based analysis of dropwise condensation on surfaces with different wettabilities

22.05 **Korean Society of Mechanical Engineers-Micro Nano Division, Spring Conference**
Poster Presentation / **J. Jeong**, T. Kim, B. J. Lee, J. Lee
-Nanoscale topography prediction and simulation of Germanium-on-Nothing using deep learning

22.04 **Korean MEMS**
Oral Presentation / **J. Jeong**, B. J. Lee, J. Lee
-Machine vision-based nano scale topography prediction and simulation

22.01 **Nano Convergence Conference**
Poster Presentation / **J. Jeong**, B. J. Lee, J. Lee
-Encoder-decoder neural network and PCA-based surface inspection methodology for GON structures

21.11 **Micro Nano Systems Conference**
Poster Presentation / **J. Jeong**, T. Kim, B. J. Lee, J. Lee
-PCA-based surface inspection methodology for GON structures

21.11 **Korean Society of Mechanical Engineers, Fall Conference**
Oral Presentation / **J. Jeong**, T. Kim, B. J. Lee, J. Lee
-PCA-based sub-surface analysis for Germanium-on-Nothing structures using nanoscale surface micrographs

21.05 **Korean Society of Mechanical Engineers-Thermal Engineering Divison, Spring Conference**
Poster Presentation / T. Kim, **J. Jeong**, B. J. Lee, J. Lee
-High-resolution image-based silicon and germanium self-assembled cavities' transient analysis

Work Experience

22.1, 23.1 **Teaching Assistant, Korean Camp, School of Digital Humanities and Computational Social Sciences, KAIST**
-Taught 10 foreign freshmen students to practice Korean communication through various activities, resulting in all students passing the course

18.07 – 18.09 **Campus Tour Guide, Admissions, University of Minnesota-Twin Cities**
-Conducted 4 campus tours every week for groups of 10-15 visitors

16.09 – 18.12 **Research Assistant, Mechanical Engineering Dept., University of Minnesota**
-17.12 – 18.12 / Advisor: Jiarong Hong / Statistical monitoring of alga nutritional condition via locomotion mode analysis
-17.09 – 17.12 / Advisor: Rajesh Rajamani / Super capacitor-based hand presssure sensor
-16.09 – 17.12 / Advisor: Michael McAlpine / 3D printed polymer photodetector

16.07 – 16.08 **Research Assistant, Mechanical Engineering Dept., POSTECH**
-Advisor: Sung Jin Park
-μ-powder-based efficient PIM manufacturing

16.07 – 16.08 **Teaching Assistant, English Dept., Pohang University of Science and Technology**
-Assisted administering the Campus English Program, a summer semester English communication course for undergraduate students
-Taught 15 students to practice English communication skills through various activities, resulting in all students passing the course

Extracurricular Activities

22.3 – 22.12 **Vocalist, HUG**
-Held 2 performances every semester as a vocalist of the acoustic music student group HUG

16.09 – 17.09 **Vocalist, Sentimental Sounds**
-Conducted and rehearsed acoustic music and collaborated with other performance groups for spring concert
-Advertised the activities and concerts through online and offline mediums including SNS, fundraisers, and busking events

15.12 – 18.12 **Captain, FC Green**
-Managed the university's intramural soccer team as the team captain, resulting in three second places out of 6 semesters

15.09 – 16.12 **Board Member, Korean-American Scientists and Engineers Association (KSEA)**
-Planned & organized events involving students and professionals to network with professionals inside and outside of the University
-Collaborated with CSE students groups outside the Korean-American community to network and experience various academic cultures