

# Jaewoo Jeong

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## Vocational Timeline

- 23.03 – **Korea Advanced Institute of Science and Technology,**  
*Doctor of Philosophy in Mechanical Engineering, GPA – 3.84/4.30.*  
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

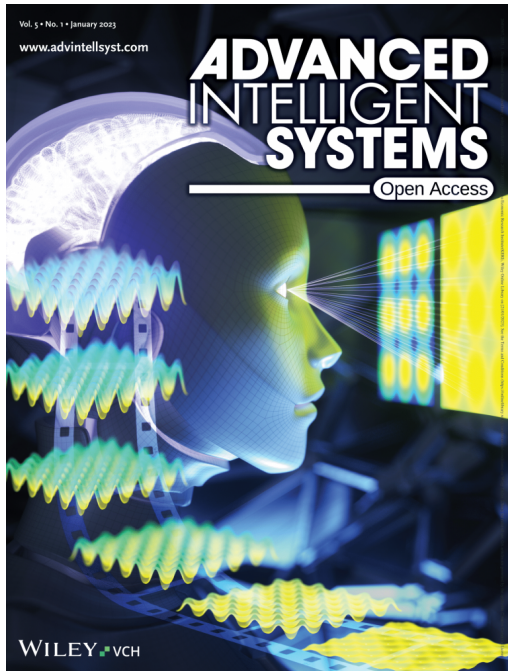
## International Conferences

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 / [Github](#)
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 / [Github](#)
2. **AAAI 2023**, D. Park, **J. Jeong**, K. Yoon  
-Improving Transferability for Cross-domain Trajectory Prediction via Neural Stochastic Differential Equation / [Github](#)
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

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## 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**

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## 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

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## 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 / [Github](#)
- 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

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## 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 Division, 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 pressure 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  
 - $\mu$ -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