

Kibum Jung

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Education

- 2023– **Ph.D Candidate in Mechanical Engineering,**
Korea Advanced Institute of Science and Technology.
Advisor: Prof. Jungchul Lee
- 2020–2022 **Masters of Mechanical Engineering,**
Kyungpook National University.
Advisor: Prof. Seung-Han Yang
- 2020–2021 **Visiting Scholar,**
Purdue University.
- 2014–2020 **Bachelor of Mechanical Engineering,**
Kyungpook National University.

Research Area

- Thermal imaging sensor based on germanium self-assembly
- Micromanufacturing based on metal assisted chemical etching
- MEMS/NEMS

Awards

- Mar. 2025 **Best Paper Award, The 27th Korean MEMS Conference (KMEMS 2025)**
Kibum Jung, Juhee Ko, Taeyeong Kim, Jungchul Lee,
- Fabrication and Electro-Thermo-Mechanical Characterization of a Hot Arm Actuator
- Nov. 2023 **Best Paper Award, Fall Conference of Korean Society of Mechanical Engineers (KSME)**
Kibum Jung, Jungchul Lee,
- Local heating and temperature measurement on silicon wafer using two lasers

Publications

1. **Kibum Jung,** Jungchul Lee. "A review of the mechanism and optimization of metal-assisted chemical etching and applications in semiconductors" *Micro and Nano Systems Letters* 12, 27 (2024). DOI:10.1186/s40486-024-00217-x
2. **Kibum Jung,** Jungchul Lee. "Facile extraction of scanning probe shape for improved deconvolution of tip-sample interaction artifacts" *Micro and Nano*

Systems Letters 12, 16 (2024). DOI:10.1186/s40486-024-00207-z

3. **Kibum Jung**, Jungchul Lee. "Local Heating and Simultaneous Temperature Measurement of Single Crystal Silicon Using Two Lasers with Different Wavelengths" *Journal of the Korean Society of Mechanical Engineers* 48, 8, 517-522(2024). DOI:10.3795/KSME-B.2024.48.8.517
4. **Kibum Jung**, Sung Hwan Kweon, Martin Byung-Guk Jun, Young Hun Jeong, Seung-Han Yang. "CNN-based Human Recognition and Extended Kalman Filter-based Position Tracking Using 360° LiDAR" *Journal of the Korean Society for Precision Engineering* 8, 575 - 582 (2022).

Conferences

- Mar. 2025 (Poster) **The 27th Korean MEMS Conference (KMEMS 2025)**, Jeju
Kibum Jung, Juhee Ko, Taeyeong Kim, Jungchul Lee,
- Fabrication and Electro-Thermo-Mechanical Characterization of a Hot Arm Actuator
- Mar. 2025 (Poster) **The 27th Korean MEMS Conference (KMEMS 2025)**, Jeju
Zhuo Feng Lee, Taeyeong Kim, **Kibum Jung**, Jungchul Lee, Gi-Dong Sim,
- Mechanical characterization of Silicon-on-Nothing structures with nanoindentation and point-load deflection experiments
- Feb. 2025 (Oral) **The 6th International Conference on Manufacturing Process & Technology (ICMPT 2025)**, Bali
Taeyeong Kim, **Kibum Jung**, Jungchul Lee,
- Concealed cavity in silicon for robust and irreplicable anti-counterfeiting function
- Nov. 2024 (Poster) **2024 Fall Conference of the Society of Micro and Nano Systems**, Busan
Kibum Jung, Bong Jae Lee, Jungchul Lee,
- Non-Destructive Measurement for the Shape and Position of Embedded Cavity Structures Using Reflection Analysis
- May. 2024 (Poster) **Spring Conference of Korean Society of Mechanical Engineers (KSME)**, Gyeongju
Kibum Jung, Jungchul Lee,
- Facile extraction of scanning probe shape towards deconvolution of tip-sample interaction artifact
- Nov. 2023 (Oral) **Fall Conference of Korean Society of Mechanical Engineers (KSME)**, Gyeongju
Best Paper Award/Kibum Jung, Jungchul Lee,
- Local heating and temperature measurement on silicon wafer using two lasers
- July. 2022 (Poster) **International Conference on Precision Engineering and Sustainable Manufacturing (PRESM 2022)**, Jeju Island
Kibum Jung, Sung Hwan Kweon, Kwang-Il Lee, Seung-Han Yang,
- Prediction of Thermal Induced Error of a Stage by External Heat Source using a Thermal Imaging Camera and ANN Model

- May. 2022 (Poster) **European Society for Precision Engineering and Nanotechnology (EU-SPEN 2022)**, Geneva, Swiss
Kibum Jung, Sung Hwan Kweon, Kwang-Il Lee, Seung-Han Yang,
 - Study on Environmental Thermal Induced Error Modelling of a Stage based on Artificial Neural Network
- May. 2022 (Poster) **Spring conference of Korean Society for Precision Engineering (KSPE)**, Jeju Island
Kibum Jung, Sung Hwan Kweon, Martin Byung-Guk Jun, Young Hun Jeong, Seung-Han Yang
 - CNN-based Human Recognition and Extended Kalman Filter-based Position Tracking Technique using 360° LIDAR
- Nov. 2021 (Poster) **Fall Conference of Korean Society for Precision Engineering (KSPE)**, Busan
Kibum Jung, Sung Hwan Kweon, Seung-Han Yang
 - Environmental Thermal Induced Error Modelling of a Stage using Artificial Neural Network
- July. 2021 (Oral) **International Conference on Precision Engineering and Sustainable Manufacturing (PRESM 2021)**, Online
 Kyeongeun Song, Martin Byung-Guk Jun, **Kibum Jung**, Xingyu Fu, Gyuho Kim, Byung-Kwon Min
 - The Geometrical Predictions of Machining Defects in CFRP Milling
- May. 2021 (Poster) **Spring conference of Korean Society for Precision Engineering (KSPE)**, Online
Kibum Jung, Huitaek Yun, Jin-Ho Park, Sung Hwan Kweon, Martin Byung-Guk Jun, Young Hun Jeong, Seung-Han Yang
 - 사람-로봇 협업을 위한 라이다 센서의 사람 인식 방안 개발
- Sep. 2020 (Poster) **Spring conference of Korean Society for Precision Engineering (KSPE)**, Online
Kibum Jung, Sung Hwan Kweon, Seung-Han Yang
 - 하중 변동에 의한 공기 베어링 스테이지의 변위 보정 시스템 연구