# Heungjoo Shin, Ph. D.

## EDUCATION

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|---|---|
| Ph.D. | Mechanical Engineering, 2006, Georgia Institute of Technology, Atlanta, USA |
| | Dissertation: Fabrication of Atomic Force Microscope Probes Integrated with Electrodes for Micro Four-Point Probe and SECM-AFM |
| | Advisor: Professor Peter J. Hesketh |
| M.S. | Mechanical Design & Production Engineering, 2000, Seoul National University, Korea |
| | Thesis: Analysis of Tappet Rotation of Direct Acting Type OHC Valve Train System |
| B.S. | Mechanicla Design & Production Engineering, 1998, Seoul National University, Korea |

## PROFESSIONAL EXPERIENCES

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|---|---|---|
| School Head | School of Mechanical, Aerospace & Nuclear Engineering<br>Ulsan National Institute of Science and Technology | Mar 2016 – Feb 2018 |
| Dormitory Director | Ulsan National Institute of Science and Technology | Mar 2009 – Feb 2014 |
| Associate Professor | School of Mechanical, Aerospace & Nuclear Engineering<br>Ulsan National Institute of Science and Technology | Mar 2014 - present |
| Assistant Professor | School of Mechanical & Nuclear Engineering<br>Ulsan National Institute of Science and Technology | Jan 2009 – Feb 2014 |
| Post-doctoral Research Fellow | Schoolo of Chemistry & Biochemistry<br>Georgia Institute of Technology, Atlanta, USA | Mar 2006 – Dec 2008 |

## RESEARCH INTERESTS

- Carbon-MEMS: Unconventional micro/nanofabrication technology facilitating micor/nano carbon structure patterning

- Highly sensitive gas sensors based on suspended hybrid nanowires
- Biosensors and immunoassays based on carbon nanostructures (Interdigitated electrodes; Stacked electrode set)
- Multifunctional atomic force microscopy for detecting or monitoring multiple bio-molecules inside live cells and surface properties
- Molecular diagnostic devices based on mixed-scale micro-/nanofluidic devices