

# Jae Jun Park

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## EDUCATION

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- Aug.2016 – Current**     **University of Illinois at Urbana Champaign, Illinois, United States of America**  
Master of Science in Mechanical Engineering
- Mar.2010 – Feb.2016**     **Seoul National University, Seoul, Korea**  
Bachelor of Science in Mechanical and Aerospace Engineering
- Cumulative GPA : 3.93/4.3
  - Major GPA : 4.02/4.3

## RESEARCH EXPERIENCES

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- Aug.2016– Current**     **DARPA Robotics Fast Track Project**  
**University of Illinois at Urbana Champaign, USA**     Prof. Hae-Won Park
- Design and fabricate of a Flying Squirrel Robot
    - Design flexible membranes and a body of the robot
  - Develop and analyze an aerodynamic model of the robot
  - Optimize and simulate gliding trajectories
- Feb.2013– Dec.2015**     **Undergraduate Research Assistant**  
**Seoul National University, Korea**     Prof. Kyu-Jin Cho
- Participate in Multiscale Robotics Project, Feb 2013.02 – Mar 2014
  - “Development of design and manufacturing for multi-scale mass-deployable cooperative robots”
  - Design the deformable wheel robot based on origami structure
  - Develop a fabrication process of the multi-layer sheet using various material for the Origami Structure
  - Introduced at the IEEE Spectrum
    - URL:<http://spectrum.ieee.org/automaton/robotics/robotics-hardware/robots-get-flexible-and-torqued-up-with-deformable-origami-wheels>
  - Introduced at the Science Editor’s Choice
    - URL: <http://science.sciencemag.org/content/356/6342/twil>
  - Develop an octopus-inspired jet-propelled robot based on origami structure
- May.2014-Oct.2014**     **Undergraduate Research Program**  
**Seoul National University, Korea**     Prof. Kyu-Jin Cho
- Research on active origami design and fabrication method for soft morphing robot
    - bio-inspired design, dynamic modeling, MATLAB simulation, optimization, and fabrication

## PUBLICATIONS

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1. D.Y. Lee, J.S. Kim, S.R. Kim, **J.J. Park**, and K.J. Cho, “Origami Wheel Transformer: A Variable-Diameter Wheel Drive Robot Using an Origami Structure,” *Soft Robotics*, 4(2), pp.163-180, Jun. 2017
2. D.Y. Lee, J.S. Kim, **J.J. Park**, S.R. Kim, and K.J. Cho, “**Fabrication of Origami Wheel using Pattern Embedded Fabric and its Application to a Deformable Mobile Robot**,” *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, p. 2565, 2014
3. D.Y. Lee, S.R. Kim, J.S. Kim, **J.J. Park**, and K.J. Cho, “**Fabrication of Origami Structure using Pattern Enclosed Composite**,” *2013 13th International Conference on Control, Automation and Systems (ICCAS)*, Oct. 2013.
4. D.Y. Lee, J.S. Kim, S.R. Kim, **J.J. Park**, and K.J. Cho, “**Design of Deformable-Wheeled Robot Based on Origami Structure with Shape Memory Alloy Coil Spring**,” *The 10th International Conference on Ubiquitous robots and Ambient Intelligence (URAI)*, Oct. 2013.
5. J.S. Kim, **J.J. Park**, D.Y. Lee, S.R. Kim, and K.J. Cho, “**Design of Bi-stable Structure by using Origami and Driving Mechanism**”, *The Korean Society of Precision Engineering (KSPE) Conference*, pp.1495-1496, 2013.
6. S.R. Kim, D.Y. Lee, J.S. Kim, **J.J. Park**, and K.J. Cho, “**Fabrication of Origami Structure Using Composite Materials based on 2-D Manufacturing Process for Robots**”, *The Korea Robotics Society Annual Conference*, 2013.

## **PATENTS**

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1. D.Y. Lee, J.S. Kim, S.R. Kim, **J.J. Park**, and K.J. Cho, “Variable diameter wheel”, United States of America (App. No. 14/570,166).
2. D.Y. Lee, J.S. Kim, S.R. Kim, **J.J. Park**, and K.J. Cho, “Variable diameter wheel”, Republic of Korea Patent (App. No. 10-2013-0157355).

## **PRESENTATION & POSTERS**

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1. **J.J. Park**, D.H. Lim, J.Y. Kang, K.H. Sim, and J.H. Lim, “**Smart weighing machine: the prevention and care of Hallux valgus for modern people**”, presented at *2015 E<sup>2</sup>FESTA Engineering Education Festival*, Daegu, Korea, 2015.
2. S.R. Kim, D.Y. Lee, J.S. Kim, **J.J. Park**, and K.J. Cho, “**Fabrication of Origami Structure Using Composite Materials based on 2-D Manufacturing Process for Robots**”, presented at the *Korea Robotics Society Annual Conference*, Kangwon, Korea, 2013

## **HONORS & AWARDS**

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| Aug.2016          | <b>MechSE Outstanding Fellowship</b> , University of Illinois at Urbana Champaign  |
| Oct.2015          | <b>Special Prize, Infinite Challenge Idea Startup Award – Region preliminary round, Capstone Design Contest</b> , Korea University   |
| Sep.2015          | <b>The Second Prize in Dongbu Award for SNU Creative Design Fair 2015</b> <ul style="list-style-type: none"><li>• Prize : \$500 and Asia Tour (Singapore Electronics Conference. 2016)</li></ul>     |
| Dec.2014          | <b>The Best Presentation Award</b> <ul style="list-style-type: none"><li>• Bachelor Thesis Presentation Contest, School of Mechanical and Aerospace Engineering, Seoul National University</li></ul> |
| Dec.2013          | <b>The First Prize in Design, Manufacturing Process and Laboratory</b> , Seoul National University   |
| May.2013          | <b>Best Student Paper Award 2013, Korea Robotics Society Annual Conference</b>   |
| Mar.2011–Aug.2015 | <b>Hyoungae Foundation Scholarship</b> , Hyounggae <ul style="list-style-type: none"><li>• Full undergraduate tuition</li></ul>  |
| Oct.2010          | <b>Scholarship granted by Seoul National University Engineering Department Alumni Association</b> <ul style="list-style-type: none"><li>• Granted \$ 2,500</li></ul>                                 |
| Sep.2010          | <b>SNU Scholarship for Superior Academic Performance, Seoul National University</b> <ul style="list-style-type: none"><li>• Granted \$ 404</li></ul>   |

## **TEACHING EXPERIENCE**

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|---------------------|---|
| Mar.2014–Aug.2014   | <b>Educational Tutor</b><br><b>College of Engineering, Seoul National University, Seoul</b> <ul style="list-style-type: none"><li>• Educated college students Engineering Mathematics 1</li></ul> |
| Sep.2013 –Feb. 2014 | <b>Educational Tutor</b><br><b>College of Engineering, Seoul National University, Seoul</b> <ul style="list-style-type: none"><li>• Educated college students Dynamics</li></ul>                  |

## **EXTRACURRICULAR ACTIVITIES**

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| Mar.2012– Sep.2012 | <b>Military Service</b><br><b>Deokpung middle school administration office, Gyeonggido</b> <ul style="list-style-type: none"><li>• Public service worker</li></ul>  |
| Aug.2010           | <b>Volunteer Service</b><br><b>Summer School Instructor, Sang-il Women High School, Seoul</b> <ul style="list-style-type: none"><li>• Educated college Educated high school students science experiment</li></ul> |

## **SKILLS**

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- Programming Language : C/C++, MATLAB/Simulink, LabVIEW, Python
- Software : SolidWorks, CATIA, Microsoft Office