

Seung Jae Lee

Research Interests: Multi-Rotor UAVs, Robust Control, State Estimation (w. Sensor Fusion), Disturbance Observer (DOB), Robot Platform Design & Development.

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Personal Info

Address

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Date of Birth

1988-Oct-12

Web

<http://www.sjlazza.com>

Skills

C++

4/5

MATLAB & Simulink

4/5

ROS

3/5

CATIA

4/5

LATEX

5/5

UAV Operation (w. Manual Control)

4/5

Languages

Korean

5/5 (Native Speaker)

English

4/5

Education

2016-03 – 2020-02	Seoul National University, Seoul, Republic of Korea Ph. D. in Mechanical and Aerospace Engineering. Advisor: H. Jin Kim
2014-03 – 2016-02	Seoul National University, Seoul, Republic of Korea M. S. in Mechanical and Aerospace Engineering. Advisor: H. Jin Kim
2008-03 – 2014-02	Hanyang University, Seoul, Republic of Korea B. S. in Mechanical Engineering. Advisor: Jong Hyeon Park

Major Academic Experiences

2020 – present	Postdoctoral Researcher <i>High Performance Robotics Laboratory (HiPeRLab), UC Berkeley, Berkeley, CA, USA</i> <ul style="list-style-type: none">Berkeley – Army Research Laboratory (ARL) project PostDoc.
2017	International Research Intern (I2) @ NASA Ames Center <i>Advanced Control and Evolvable Systems (ACES) Group, NASA ARC, Mountain View, CA, USA</i>

Major Activities, Honors, Awards, Scholarships

2014 – present	Multiple Industry-Academia-Government Research Projects <i>8 Research Participant (RP), 3 Project Manager (PM)</i>
	International Seminars <ul style="list-style-type: none">[2018] SNU-Stanford Joint Workshop - Presenter[2018] Seminar @ UC Berkeley - Presenter
	Awards <ul style="list-style-type: none">[2018] Silver Award, Samsung Humantech Paper Awards (Prize: 11K USD)[2015] Silver Award, Hyundai E&C Tech. Awards (Prize: 3K USD)[2013] Excellence Award, Hanyang University Capstone Design Fair
	Scholarships <ul style="list-style-type: none">SNU Space Convergence Education Track Scholarship, 2017-2018Brain Korea 21 (BK21) Scholarship, 2014-PresentAcademic Excellence Scholarship, 2013

Major Publications

2020	[J]	Seung Jae Lee , Inkyu Jang, and H. Jin Kim, "Fail-safe Flight of a Fully-Actuated Quadcopter in a Single Motor Failure." IEEE Robotics and Automation Letters (RA-L), 2020, Accepted.
2020	[J]	Seung Jae Lee , Dongjae Lee, Junha Kim, Dabin Kim, Inkyu Jang, and H. Jin Kim, "Fully-Actuated Autonomous Flight of Thruster-Tilting Multirotor." IEEE Transactions on Mechatronics (T-Mech), 2020.
2019	[J]	Seung Jae Lee , Seung Hyun Kim, and H. Jin Kim, "Robust Translational Force Control of Multi-Rotor UAV for Precise Acceleration Tracking." IEEE Transactions on Automation Science and Engineering (T-ASE), 2019
2019	[C]	Seung Jae Lee , Dongjae Lee, and H. Jin Kim, "Cargo Transportation Strategy using T^3 -Multirotor UAV." IEEE ICRA 2019
2018	[C]	Seung Jae Lee , Kelley E. Hashemi, Michael C. Drew, Nhan T. Nguyen, and H. Jin Kim. "Robust Gust Load Alleviation Control using Disturbance Observer for Generic Flexible Wing Aircraft in Cruising Condition." ACC 2018
2018	[C]	Seung Jae Lee , Jaehyun Yoo and H. Jin Kim. "Design, Modeling and Control of T^3 -Multirotor: a Tilting Thruster Type Multirotor." IEEE ICRA 2018
2017	[C]	Seung Jae Lee , and H. Jin Kim. "Autonomous Swing-Angle Estimation for Stable Slung-Load Flight of Multi-Rotor UAVs." IEEE ICRA 2017
2016	[C]	Seung Jae Lee , Suseong Kim, Karl Henrik Johansson and H. Jin Kim. "Robust Acceleration Control of a Hexarotor UAV with a Disturbance Observer." CDC 2016

Patents

International Patents

[Patent 2] (2020) US 16/760,276 (under review)
[\[Patent 1\] \(2018\) PCT/KR2018/015715 \(PCT registered\)](#)

Domestic Patents (Korea)

[Patent 4] (2020) 20-0047350 (Under review)
[Patent 3] (2020) 20-0036174 (Under review)
[\[Patent 2\] \(2018\) 10-2129075 \(Patent registered\)](#)
[\[Patent 1\] \(2017\) 10-1978888 \(Patent registered\)](#)