Hyunsang Park

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Education

Master of Science in Aerospace Engineering Mar. 2018 – Feb. 2020

Seoul National University, Seoul, Republic of Korea

- Advisor: Prof. Youdan Kim
- Concentration: Guidance, Navigation, and Control
- Thesis title: "*Adaptive Fault Tolerant Control Design for Nonlinear Aircraft System with Actuator Faults"*
- GPA 4.07/4.3

Bachelor of Science in Mechanical & Aerospace Engineering Mar. 2012 – Feb. 2018

Seoul National University, Seoul, Republic of Korea

- Cumulative GPA 3.73/4.3
- Two years of absence to fulfill military duty (Mar. 2014 - Feb. 2016)

Publications

Journal Paper in Review

H. Park and Y. Kim, "Adaptive Fault-Tolerant Flight Control Using a Nonlinear Reference Model", *IEEE Transactions on Aerospace and Electronic Systems (in review)*

Conference Proceedings

H. Park and Y. Kim, "Nonlinear Geometric Fault Detection and Isolation of Redundant Actuators in Aircraft", *The Korean Society for Aeronautical and Space Sciences 2019 Fall Conference*, Jeju, Korea, November 2019

H. Park and Y. Kim, "L1 Adaptive Backstepping Control of Aircraft under Actuator Failures", *8th European Conference for Aeronautics and Aerospace Sciences*, Madrid, Spain, July 2019

H. Park and Y. Kim, "Model Free Estimation of Wind and Air Velocity of UAV Using Extended Kalman Filter", *The Korean Society for Aeronautical and Space Sciences 2018 Fall Conference*, Jeju, Korea, November 2018

Research Experience

Graduate Research Assistant Mar. 2018 – Feb. 2020

Flight Dynamics and Control Laboratory, Seoul National University

- Project title: "Development of Reconfigurable Flight Control Law against Aircraft Sensor/Actuator," supported by Korea Aerospace Industries
- Developed aircraft model-based and model-free fault detection and diagnosis of air data system
- Developed fault detection and isolation algorithm and adaptive fault-tolerant controller for aircraft with redundant input

Bachelor's Thesis Research Mar. 2017 – Dec. 2017

Flight Dynamics and Control Laboratory, Seoul National University

- Advisor: Prof. Youdan Kim
- Thesis: *Design and Control of an Autonomous Quadrotor for Flip Maneuver*
- Won the Outstanding BS Thesis Presentation Award

Honors and Awards

Merit-based Scholarship (partial tuition) Fall 2019
Seoul National University

Brain Korea 21 Plus Research Scholarship (stipend, 4 semesters) Spring 2018 - Fall 2019
Ministry of Education, Republic of Korea

Outstanding BS Thesis Presentation Award Dec. 2017
Department of Mechanical & Aerospace Engineering, Seoul National University

- For the presentation of the BS Thesis, "*Design and Control of an Autonomous Quadrotor for Flip Maneuver"*

Merit-based Scholarship (partial tuition, 3 semesters) Fall 2017, Spring 2017, Fall 2012
Seoul National University

National Scholarship for Science and Engineering (full tuition) Fall 2016
Korea Student Aid Foundation

Eminence Scholarship (full tuition, 2 semesters), *Seoul National University* Spring 2013, Fall 2013
Seoul National University

Other Experience

Airforce Enlisted (mandatory service) Jan. 2014 - Jan. 2016
Staff Sergeant, Republic of Korea Airforce

Amateur Astronomy Association (university club) Mar. 2012 - Jan. 2014
Seoul National University

- General Affairs (Jul. 2013 - Dec. 2013)
- Regular Member (Jul. 2012 - Jan. 2014)

Community Service Jun. 2013 - Jul. 2013
Institute for Global Social Responsibility, Seoul National University

- Participated in and completed community service activities at *Center for Child Educare Service & Research* in Seoul National University as a part of Community Service course

Miscellaneous

Languages: Korean(native), English(fluent)
Programming: Matlab, Simulink, Python, C/C++ , Java
Computer-Aided Design: SolidWorks, CATIA