

Korea-EU Horizon Europe Researchers Networking Forum on Energy & Advanced Mobility

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- **Assistant Professor**
- **Department of Aerospace Engineering
Seoul National University**
- **Control, Optimisation,
Machine Learning**

1. Short Introduction of your Organization

- Seoul National University
 - Research-oriented national university
 - University-level support for Horizon Europe and other international collaborations
 - Appreciation of fundamentals
- Department of Aerospace Engineering
 - System-focused approach in research and teaching
 - Recent drives in AI, robotics, and space technologies
 - 15 faculty members engaged in various international collaborations
 - Research facilities: wind tunnel, space chamber, gas gun, motion capture system, etc



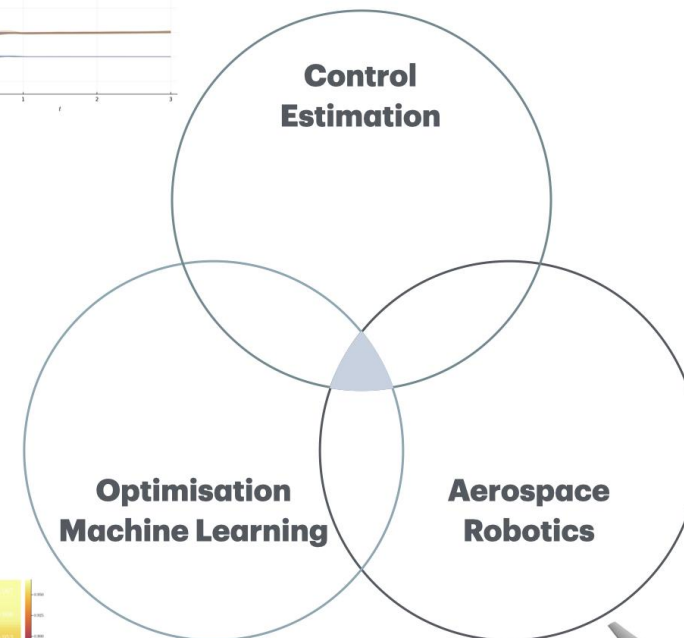
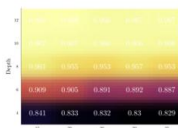
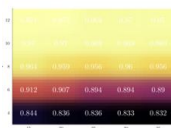
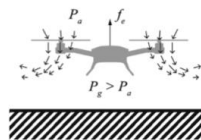
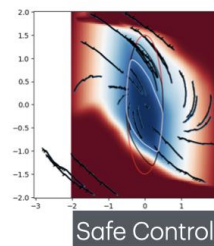
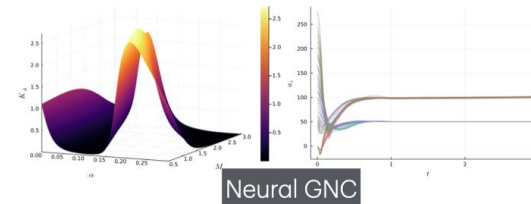
- 18th in QS Asia University Rankings 2025
- 38th in QS World University Rankings 2025



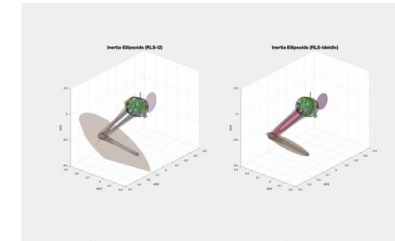
- 15th in THE Asia University Rankings 2025
- 62nd in THE World University Rankings 2025

2. Expertise

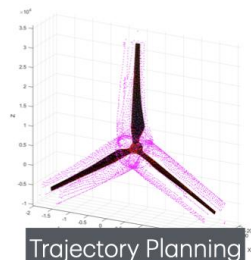
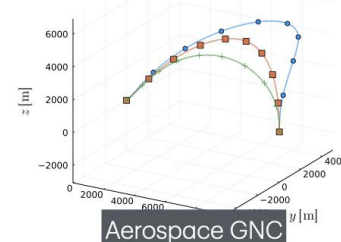
- Expertise of Aerospace Autonomy and Intelligence Laboratory (AAIL)
 - Control algorithms
 - Computational approaches
 - Autonomous systems applications
- Potential contribution to a consortium
 - Algorithms for **safe/adaptive autonomy**
 - Research collaboration network
 - Bridge between academia and industry
- Keywords
 - Control, Safety, Adaptation, Optimisation



Optimisation for Learning



Adaptive Control





3. Your Project Idea

- Targeted call
 - HORIZON-CL5-2027-05-D5 / HORIZON-CL5-2026-10-D6 / HORIZON-CL5-2027-05-D6
 - ?
- Main objectives
 - Greener aviation
 - Safety assurance
 - More intelligent autonomy in aerial mobility
- Brief explanation of the idea
 - **Efficient flight** of aircraft with **morphing wing** using **distributed pressure sensors**
 - On-going consortium building efforts
 - More details will be introduced later in technical presentation session



4. Profile You are Seeking and Why

- Project development initiative
 - Mark Spiller (DLR, Germany) -- MORPHAIR Project, RL-Based Control
 - Dmitry Ignatyev (Cranfield, UK) -- Bio-inspired Flight, Systems & Control
 - Namhoon Cho (SNU, South Korea) -- Safe Adaptive Control, AI/ML for Control
- Profiles we are looking for
 - Sustainable aviation (e.g., fuel cell, hydrogen-based propulsion)
 - Electrified aircraft
 - Artificial intelligence for robotic vehicles
 - Ornithology
 - Atmospheric science
 - and many more



5. Contact Details

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