

Kasper A. R. Grøntved, Ph.D. Student

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in KasperGrontved

🔗 kasperg3

🌐 Check out my work at <https://blog.grontved.dk>



Employment History

- 2022 – now 📌 **Ph.D. student**, SDU UAS Center, The University of Southern Denmark.
- 2020 – 2022 📌 **Systems Engineer**, A²I Systems A/S.
- 2018 – 2020 📌 **Student Programmer**, A²I Systems A/S.

Education

- 2022 – now 📌 **Ph.D., University of Southern Denmark.**
Thesis title: *Cooperative Control of Multirobot Systems in Real-World Applications*
Granted PhD position out of 42 applicants.
- 2018 – 2022 📌 **M.Sc. Advanced Robotic Systems, University of Southern Denmark**
Thesis title: *Multi-Agent Decentralised Coordination using CNRL for Industrial Applications.*
- 2015 – 2018 📌 **B.Sc. Robotic Systems, University of Southern Denmark**
Thesis title: *Semantic segmentation using a deep neural network for pose estimation of a rigid object.*

Research Publications




Journal Articles

- 1 M.-T. O. Hoang, K. A. R. Grøntved, N. van Berkel, M. B. Skov, A. L. Christensen, and T. Merritt, “Drone swarms to support search and rescue operations: Opportunities and challenges,” *Cultural Robotics: Social Robots and Their Emergent Cultural Ecologies*, pp. 163–176, 2023.



Conference Proceedings

- 1 K. A. R. Grøntved, M.-T. Bahodi, and A. L. Christensen, “Automated task generation for multi-drone search and rescue operations,” in *21st International Conference on Distributed Computing and Artificial Intelligence*, Accepted, 2024.
- 2 K. A. R. Grøntved, J. H. Jepsen, A. L. Christensen, K. Jensen, U. P. S. Lundquist, and Miguel Campusano, “Towards autonomous multi-UAV U-space operation planning,” in *International Conference on Unmanned Aircraft Systems (ICUAS)*, Accepted, 2024.
- 3 E. G. A. Rolland, K. A. R. Grøntved, A. L. Christensen, M. Watson, and T. Richardson, “Autonomous UAV volcanic plume sampling based on machine vision and path planning,” in *2024 International Conference on Unmanned Aircraft Systems (ICUAS)*, Accepted, 2024.
- 4 K. A. R. Grøntved, U. P. Schultz, and A. L. Christensen, “Decentralized multi-UAV trajectory task allocation in search and rescue applications,” in *21st International Conference on Advanced Robotics*, IEEE, 2023.
- 5 A. L. Christensen, K. A. R. Grøntved, M.-T. O. Hoang, *et al.*, “The HERD project: Human-multi-robot interaction in search & rescue and in farming,” in *Adjunct Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems*, 2022.


Skills

- Languages  Strong reading, writing, and speaking competencies in English and Danish.
- Coding  C++, Python, Java, SQL, \LaTeX , ROS, FreeRTOS, PyTorch
- Misc.  Academic research, \LaTeX typesetting and publishing, Unix systems, Docker, Git, Drone Pilot Assistant, Certified A1/A3 drone pilot

Supervision

-  **Nicoline Louise Thomsen**, *University of Southern Denmark*, Master Thesis: Robust Area Coverage by a Swarm of Unmanned Aerial Vehicles, successfully defended 2023
-  **Emil Månsson & Kristian Damkjær Jensen**, *University of Southern Denmark*, Master Thesis: Swarm Intelligence for Land-based Mobile Robots Operating in a Large Environment, successfully defended 2023.

Research Projects

-  HERD: Human-AI collaboration: Engaging and controlling swarms of robots and drones [URL]