Kasper A. R. Grøntved, Ph.D. Student

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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,** A^{2}I Systems A/S.
2018 – 2020 **Student Programmer,** A^{2}I 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, 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)*, Under review, 2024.
2. 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)*, Under review, 2024.
3. 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.
4. 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.

Skills (continued)

Coding	C++, Python, Java, SQL, LaTeX, ROS, FreeRTOS, PyTorch
Misc.	Academic research, LaTeX typesetting and publishing, Unix systems, Docker, Git

Supervision

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