



Niklaß, M.; Dzikus, N.; Swaid, M.; Berling, J.; Lührs, B.; Lau, A.; Terekhov, I.; Gollnick, V.
A Collaborative Approach for an Integrated Modeling of Urban Air Transportation Systems.
Aerospace 2020, 7, 50.

Research Assistant (“HiWi”): Support the development of urban air traffic simulation environment

Task-Description:

New air-taxi prototypes promise fast urban transport solutions. Many different prototypes exist and some rough operating concepts are published. However, an overall solution of an urban air mobility (UAM) is missing. The goal of the project ULTRAS (Urbane Lufttransportsimulation – urban air traffic simulation, 3 years project) is to provide an integrative proposal of a UAM system using the Hamburg Metropolitan Area as example. The proposed system will be simulated in an integrated environment, covering flight agents, flight management, control and communication as well as traffic planning. For this project, many novel concepts and system parts have to be developed and implemented. Following tasks should be worked on:

- Data acquisition, tabulation and integration
- Support Development of new software modules and interfaces
- Improvement of existing modules
- Coupling with the Remote Component Environment (RCE) toolchain for urban air traffic
- Running simulations and data storage
- Documentation

Requirements:

- Studies in Engineering, Informatics, Traffic planning, etc.
- Motivation and ability to work independently and collaboratively
- High language proficiency of English or German
- Good programming skills (e.g. C++, Matlab, Python)
- Optional: Experience with collaborative work environments (e.g. Git, Sharepoint, Wiki)
- Accurate and reliable working style
- Remote work possible

Begin and duration:

From now on, 20-40hrs per month, up to 3 years

Contact:

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