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The German Aerospace Center DLR has a dual mandate as the national research center for aeronautics and space, and as the space agency of the German federal government. Approximately 8000 people work for DLR on a uniquely diverse range of topics spanning the fields of aeronautics, space, energy, transport and security research. They collaborate on projects extending from fundamental research to the development of the innovative applications and products of the future. If the idea of joining a top-class team of researchers working in a supportive, inspirational environment appeals to you, then why not launch your mission with us? The Institute of Communications and Navigation in Oberpfaffenhofen near Munich is offering a

Diploma / Master Thesis

Security Architecture for LDACS

Your mission:

Over the course of last several years, DLR has been actively working on developing a new L-band digital aeronautical communication system (LDACS) for civil aviation to meet the capacity requirements for future digital data link communications. DLR and its partners also looked into several possibilities to add security features to LDACS. However, these features have not been integrated into the LDACS specification or evaluated for their impact on the protocol performance.

The main goal of this master thesis is to study the integration of the proposed LDACS security architecture into the existing LDACS system architecture. The thesis should comprise two parts: (1) a theoretical part exploring possible approaches to extend the LDACS functional architecture with the proposed security features; (2) a limited simulation campaign estimating the impact of the protocol changes on the overall system performance.

Your qualifications:

- Excellent knowledge of computer networks
- Excellent Python knowledge
- Excellent computer science/security background
- Independent working

Your benefits:

Look forward to a fulfilling job with an employer who appreciates your commitment and supports your personal and professional development. Disabled applicants with equivalent qualifications will be given preferential treatment. If you have any questions concerning specific aspects of the job, please contact Dr. Thomas Gräupl by calling +49 8153 28 4218 or by sending an e-mail to Thomas.Graeupl@dlr.de.



Deutsches Zentrum
für Luft- und Raumfahrt

