

DLR is Germany's national research center for aeronautics and space as well as Germany's Space Agency. Approximately 6500 people at 13 locations work in the research areas aeronautics, space, transport, energy and security.

The **Helmholtz Research School on Security Technologies** at the German Aerospace Center (DLR) and the Technical University Berlin offers

PhD scholarship (m/f) on security imaging with millimeter waves

The mission of the Research School is to contribute to civil security by excellent research and by training and education of young researchers in technology fields which are highly relevant for civil security.

Your Task: In the past years terahertz and millimetre waves attracted a lot of attention for security applications, because at these frequencies it is possible to look through cloth and other materials. This allows for detection of hidden weapons or explosives. Within this PhD project a novel THz imaging system based on an on-chip 240 GHz transmitter/receiver system will be developed. Your tasks are:

- design of the imaging system, including the coupling optics of the transmitter/receiver, the array configuration, and the scanning scheme,
- implementation of radar capabilities for depth resolution,
- evaluation and characterization of the imaging system based on a system model.

The work will be done in close cooperation with the Leibniz Institute of High Performance Microelectronics (www.ihp-microelectronics.com).

Your Qualification:

- study in physics, finished with high marks and a Diploma or Master degree that qualifies for starting a PhD study in Germany. Candidates who are about to earn their degree are welcome to apply.
- fluently spoken and written English is essential
- basic laboratory experience
- high motivation and dedication for scientific working
- ability to work creatively in a multidisciplinary team

Interested? More information and the details of the application procedure are available at www.dlr.de/research_school_security

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