Start your mission with DLR

The German Aerospace Center (DLR) is the national aeronautics and space research centre and the space agency of the Federal Republic of Germany. Here, 10,000 employees work together on a unique variety of topics in the fields of aeronautics, space, energy, transport, security and digitalisation. Their missions range from basic research to the development of innovative applications and products for tomorrow. Cutting-edge research requires excellent minds – particularly more females – at all levels, who fully achieve their potential in an inspiring environment. Launch your mission with us.

For our **Institute of Communications and Navigation** in **Oberpfaffenhofen near Munich**, we are currently looking for an

Engineer in computer science, electrical engineering or similar (f/m/x)

Development of embedded systems in the field of optical satellite communications

Your mission:

A central research area of the Satellite Networks department is optical satellite communications. For this purpose, the department deals with laser-optical aeronautical communication, e.g. for passenger aircraft and drones. Another important research area is satellite-based quantum communication. Here, the department works on solutions to efficiently transmit photonic quantum states between satellites and ground stations.

Cutting-edge technologies for the further development of satellite navigation and space geodesy are also being investigated. Especially the research group "Advanced Optical Technologies" works, based on optical technologies, on the design of future communication and ranking systems.

As part of our team, you will develop the necessary integrated systems according to the requirements of future satellite systems with high-rate connections, using a wide range of software and tool programs.

Your responsibilities include:

- development and design of technologies enabling signal processing of high-rate communication channels and high-accuracy ranging measurements on the satellite
- definition of satellite missions for optical communication and ranging purposes (definition of requirements for onboard processing, system design and development of prototypes)
- development of software for embedded systems
- qualification of software and firmware for space applications

We offer you a very good working atmosphere in a successful research and development group, state-of-the-art equipment and an environment with national and international cooperation. You will work in an international team and develop forward-looking results. Opportunities for professional development (e.g. PhD, PMP Project Management) are given.

Your qualifications:

- completed scientific university degree (Master) in Computer Science, Electrical Engineering or a similar field
- good knowledge in space environment effects and in technological approaches for hardware/software qualification
- experience with software development for space applications
- knowledge in optical satellite communication systems and optoelectronic systems
- hands-on experience with various software and tooling programs:
  - PGA development, ideally VHDL
  - GIT and with Eclipse
  - System-on-Chip (SoC) on FPGA, possibly LEON3
- practical experience with real-time operating systems, ideally RTEMS
- good knowledge of toolchain for SoC integration and software development
- practical experience with C and C++ programming
- good knowledge of English

Your benefits:

Look forward to a fulfilling job with an employer who appreciates your commitment and supports your personal and professional development. Our unique infrastructure offers you a working environment in which you have unparalleled scope to develop your creative ideas and accomplish your professional objectives. Our human resources policy places great value on a healthy family and work-life-balance as well as equal opportunities for persons of all genders (f/m/x). Individuals with disabilities will be given preferential consideration in the event their qualifications are equivalent to those of other candidates.

If you have any questions concerning specific aspects of the job, please contact Dr. Ramon Mata Calvo by calling **+49 8153 28-3448**. Please find further information on this vacancy with the reference number 64939, and details regarding the remuneration and the application procedure, at **www.DLR.de/dlr/jobs/#47676**

DLR

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