For our location in **Hamburg**, we are looking for a

Intern (f/m/d) RF Engineering (R-10061744)

At NXP Hamburg, we've recently built up a brand-new competence center for high-frequency technologies: the Terahertz Lab. This lab supports both innovation and development activities for next-generation RF systems used in automotive radar, robotics, and future communication technologies.

You'll join a hands-on engineering environment where we simulate and characterize advanced mmWave and sub-THz systems (100 GHz and above) using state-of-the-art high-end equipment.

More and more modern RF systems integrate antennas directly into the package or chip, meaning that traditional measurements techniques aren't applicable anymore. Instead, the system performance is measured over the air (OTA), whereby one important parameter is the noise figure (NF).

During your internship, you will support our team in exploring and evaluating practical methods for OTA NF measurements. The focus is on learning how these measurements techniques work, helping to set up the measurement environment, running measurements, and supporting data analysis.

Tasks:

- Survey state-of-the-art OTA noise figure measurement techniques at mmWave and sub-THz frequencies
- Analyze advantages and limitations of different approaches with respect to accuracy, calibration effort, and applicability to integrated antenna systems
- Develop, set up, and commission OTA measurement testbeds, with a focus on precise alignment and calibration.
- Perform experimental OTA noise measurements on RF demonstrators or reference structures
- Assist in data evaluation and post-processing using Python or MATLAB
- Document findings and contribute to internal guidelines and best-practice recommendations

Requirements:

- Student of electrical engineering, communications engineering, or a comparable field
- Basic understanding of RF systems and noise concepts (noise figure, gain, SNR)
- Interest or experience in RF measurements and laboratory work
- Familiarity with RF test equipment (spectrum analyzers, signal generators, VNAs) is a plus
- Experience with Python or MATLAB for data analysis
- Structured and analytical working style, curiosity, and motivation
- Fluent English (spoken and written)

What NXP Offers:

- A monthly salary of €2,120.00
- Flexible working hours
- The possibility to work in a hybrid setup
- Networking initiatives and Employee Resource Groups such as Young Community, No Extra Planet, NXP Equal, Women in NXP, and more — fostering both professional and personal exchange

Please note:
Due to internal regulations, this position can only be offered as a mandatory internship. If a mandatory internship is not part of your study program, we kindly ask you to refrain from applying.

The successful candidate may/will be responsible for security related tasks.
The assignment may/will be in scope of security certifications, therefore a conscious and reliable way of working is necessary.

Further Information & Contact:
Functional Area: R&D
Business Line: CTO
Job Grade: Student
Hiring Manager: Christian Schmidt
Full-time / Part-time: Full-time

Recruitment Office
E-Mail: careers.germany@nxp.com

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