Master Thesis: Cryogenic Circuit Design for Trapped Ion Quantum Computing (f/m/div)*

Job description

Are you interested to work in the exciting field of quantum computing? Are you passionate about integrated circuit design? Then join our team for a Master Thesis in the field of trapped ion quantum computing (TIQC). You will work on the development of a digital to analog converter, capable to be used in cryogenic environments. With this thesis, you will contribute to scale-up the quantum computer to a large number of Qubits. Are you curious now? We are looking forward to your application!

In your new role you will:

- Work on the **concept and design of a digital to analog converter** (DAC) to control DC electrodes of ion traps for quantum computing
- **Simulate and do pre-silicon verification** of cryogenic ICs
- **Elaborate the physical design** of the developed circuits

Profile

You are best equipped for this task if you:

- Are shortly before finishing your master studies in E **lectrical Engineering, Microelectronics, Quantum Technology** or a similar field
- Already gained **first experiences with analog and mixed-signal circuit design** including **cadence design tools** (i.e. Virtuoso, Spectre, AMS etc.)
- Bring **solid programming skills** like Matlab/Simulink or Python
- Are a **team player** and enjoy to work in an **interdisciplinary team** of engineers and physicists
- Show good communication skills in **English**; German is a plus

Please attach the following documents to your application:

- CV in English
- Certificate of enrollment at university
- Latest grades transcript
- High school report

Benefits

At a glance

Location:	
Job ID:	**363260**
Start date:	**Oct 01, 2022**
Entry level:	**0-1 year**
Type:	**Full time**
Contract:	**Temporary**

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Contact

Silke Jaschik
Student Attraction Manager

- **Munich:**

Why Us

Part of your life. Part of tomorrow.

Infineon is a world leader in semiconductor solutions that make life easier, safer, and greener. Our solutions for efficient energy management, smart mobility, and secure, seamless communications link the real and the digital world.

– Power & Sensor Systems (PSS) drives leading-edge power management, sensing, and data transfer capabilities –

Infineon **PSS** semiconductors are enabling intelligent power management, smart sensitivity, and fast, reliable data processing in an increasingly digitalized world. Our state-of-the-art power and connectivity devices make chargers, servers, mainboards, power tools, and lighting systems smarter, smaller, lighter, and more energy-efficient. In addition, our trusted sensors give things an intuitive sensing capability to make them contextually aware, and our RF chips support fast and reliable data communications.

** The term gender in the sense of the General Equal Treatment Act (GETA) or other national legislation refers to the biological assignment to a gender group. At Infineon we are proud to embrace (gender) diversity, including female, male and diverse.*