

Research Scientist Ion Shuttling

Location: Weiterstadt, Germany / hybrid

Employment: Full-time

Department: R&D

Role / field: Physics

Who we are

At neQxt, we build full-stack ion-trap quantum computers, striving for excellent performance and scalability. With decades of expertise in ion-trap technology, neQxt was spun out of Mainz University, and it is headquartered in Germany's Frankfurt Metropolitan area. Our team of leading talent from Europe and beyond covers the entire value chain, from the basic hardware to end-user software level. Join our passionate team of ambitious scientists, engineers, technicians and quantum enthusiasts, building top-tier fault-tolerant quantum computers together!

Job description

You will focus on developing ion-transport routines for extended trap architectures with junctions. The core task is to determine voltage ramps across many microstructured trap segments that enable transport and dynamic register reconfiguration of ion registers with minimal motional excitation. The job is suited to a physicist or engineer with strong simulation skills and experience in ion-trap or ion-optics environments. You will collaborate with product owners, the engineering and experiment teams, and external partners.

Responsibilities

- Develop ion-transport routines for extended trap architectures with junctions
- Determine voltage ramps across multiple microstructured trap segments
- Minimize motional excitation during ion transport and dynamic register reconfiguration
- Perform electrostatic and numerical simulations to support transport design decisions
- Coordinate requirements and interfaces with trap-design, experiment, and software teams

Requirements

- Master's degree in physics, engineering, applied physics, or a closely related field
- Strong background in numerical simulation for physical systems
- Experience in electrostatic simulation for ion traps, ion optics, or comparable systems
- Experience with numerical simulation and common simulation packages such as ANSYS or Simlon
- Understanding of transport constraints in segmented or microstructured trap architectures
- Ability to translate simulation results into practical voltage-ramp designs
- Proficiency in written and spoken English

Nice to have

- Research or industry experience with ion traps, ion optics, or related electrostatic systems
- Experience with dynamic register reconfiguration or trapped-ion quantum-computing architectures
- Experience coordinating work across physics, engineering, and software teams

Who you are

- High motivation and agility, and a sense of responsibility
- Leadership skills: form, build, and grow the team
- Stakeholder management: Find compromises in conflicts and persuade effectively
- Strong team player with a collaborative, ownership-oriented mindset
- Continuous willingness to learn and teach
- Ability to explain difficult concepts in a simple way to different stakeholders
- Solution-oriented approach and ability to converge on actionable decisions
- You can manage complex and demanding technical challenges independently

What we offer

We focus on true technological advancement rather than unrealistic roadmaps. With a pragmatic, no-nonsense approach, we move fast and avoid bureaucracy. We value your individuality and offer a flexible environment tailored to your lifestyle.

- Results-oriented environment with flat hierarchies and a passionate team
- Competitive salary with automatic inflation adjustment
- Flexible working hours, hybrid/remote work and full overtime compensation
- Career development in an emerging tech field
- German language courses, if needed
- Company pension scheme
- Choice of a flexible mobility budget or company car
- Default (mandatory) German employment benefits (e.g. health / pension / unemployment insurance, paid sick leave, maternity protection, parental leave, ...)

How to apply

To apply, please submit your CV, a cover letter including your preferred starting date, and any relevant publications, project details or other supporting documents via e-mail to: career@neqxt.org. Applications will be reviewed on a rolling basis until positions are filled.