Cleveland Clinic Job Description

Senior Faculty - Quantum Computing Research
Center for Computational Life Sciences
Cleveland Clinic

The Center for Computational Life Sciences at Cleveland Clinic offers an opportunity for a visionary Senior Faculty to establish our biomedical research and healthcare system as a global leader in Quantum Computing Research. This Senior Faculty position will shape and expand Quantum Computing technologies and applications centered around biomedical science and healthcare, supported by strong institutional commitment to build their vision. The Center for Computational Life Sciences will serve as a multi-institutional hub for collaborative research in computational life sciences and biomedicine positioned at the intersection of modern biology, computer science, predictive modeling, simulation, and AI. This Senior Faculty position will have dedicated access to Cleveland Clinic’s first-of-its-kind quantum computing facilities supported by a strong research and infrastructure partnership with IBM. The first private sector, on-premises IBM Eagle Quantum System (127 Qubit) in the United States, will be installed on Cleveland Clinic’s main campus in early 2023. In the coming years, the first of IBM’s next-generation 1,000+ qubit quantum systems will also be located in Cleveland.

The Quantum Computing Research program will actively engage with universities, government, industry, startups and other relevant organizations globally and as part of Cleveland Clinic’s role in the Cleveland Innovation District. It will elevate Cleveland Clinic as the leader for a new quantum ecosystem for life sciences, focused on advancing quantum skills through the development and application of innovative computational tools and techniques fit for the transdisciplinary problems in biosciences. The focus will be broad, from the development of computational and experimental analytical methods to the validation of these new applications in disease-focused research of medical disciplines encompassed within four impact areas (cancer, cardiovascular disease, neurological and ophthalmic disease, and inflammation). The Quantum Computing Research program will be located in the newly constructed state-of-the-art research space for the Center. Rank will be commensurate with experience; competitive applicants will be considered for recruitment as a full staff member (equivalent to full professor).

Job Requirements

- Proven experience utilizing quantum computing technologies in life science and biomedical domains.
- PhD in Quantum Information Science, or related fields of study such as Physics, Chemistry or Computer Science
- A minimum of 6 years related experience
- Demonstrated ability to lead a multidisciplinary team
- A successful record of developing research partnerships and collaborative relationships with universities, industry, and research laboratories.
- Excellent interpersonal skills, the ability to work independently, outstanding written and oral communication skills, good organizational skills.

Essential Duties and Responsibilities

Major duties include
- Establish a cutting-edge research program in quantum computing, in collaboration with a diverse, interdisciplinary team of doctoral-level data scientists and engineers within the Center
- Actively facilitate other Cleveland Clinic research faculty to enable the wide adoption of quantum computing technology
- Design and carry out original research in quantum computing
- Develop research ideas into actionable research strategies and programs
- Publish research in peer-reviewed journals and conference proceedings

Interested candidates should email a curriculum vitae, the names of at least three references and a letter summarizing experience, research interests, current funding sources (including potentially moveable resources), and current team composition (including potentially movable personnel), to cclsJobSearch@ccf.org. Review of applications will occur on a rolling basis and continue until the position is filled.

This is a central and critical role for Cleveland Clinic.

**Description of Cleveland Clinic Infrastructure for Health care Innovation**

Cleveland Clinic has operated for over 100 years on the principle of bringing innovative teams together to provide better care for patients worldwide. Today, Cleveland Clinic is a world leader in science-based healthcare (see: [Cleveland Clinic Main Campus Tour video](#)). Our strategic plan for Research Development will harness information technology to power significant advances in both personalized and population medicine. A major component of the strategy will be our anchor role in building the Cleveland Innovation District. This unprecedented collaboration includes participation and investment by the State of Ohio along with 5 independent Cleveland healthcare and academic institutions and is designed to transform research, education, and economic opportunities in Northeast Ohio and globally.

As part of the Cleveland Innovation District, Cleveland Clinic has pledged to double its research footprint and output in the next five years and create thousands of new jobs. A substantial part of this commitment involves the creation of the Global Center for Pathogen & Human Health Research. A major goal of the center is to develop the means to prevent or combat the next pandemic or global health crisis and it will operate under the tandem principles of “Discover without Limits” and “Transform Discovery into Practice.”

The Global Center will reside in 400,000 square feet of newly constructed research space housing state-of-the-art laboratories and technologies. Cleveland Clinic’s international clinical care footprint provides a large, growing, and diverse patient population giving our research teams access to tens of thousands of unique biological samples through the centralized Cleveland Clinic Bio-Repository. Furthermore, the [Discovery Accelerator](#), a newly established partnership with IBM Research, will leverage high-performance computing using hybrid cloud, artificial intelligence (AI), and quantum computing technologies to empower and accelerate big data research. The newly established Center for Therapeutic Discovery provides a full-scale drug discovery effort to identify new drug targets and therapies.

*Cleveland Clinic is pleased to be an equal employment/affirmative action employer: Women/Minorities/Veterans/Individuals with Disabilities are*
encouraged to apply.
We are a smoke/drug free environment.