GRANT- PAID JOB OPPORTUNITY

Research Associate
Department of Mathematics and Statistics

Position Summary:
Dalhousie University invites applicants for a Research Associate position in mathematics from outstanding candidates with a strong background in categorical quantum mechanics and mathematical logic.

The Research Associate will work on a project entitled "Trusted Quantum Software via a Formally Verified Functional Quantum Programming Language". The project involves the design, semantics, and meta-theory of a functional programming language for quantum computing and using the language to investigate questions in quantum information theory.

Responsibilities:
- Apply methods of category theory and formal logic to the design of a type-safe functional quantum programming language.
- Use topological semantics, modal logic, and dynamic quantum logic in the development of a formal semantics and other meta-theory of the language.
- Investigate connections between quantum contextuality and quantum programming language design.
- Interact with team members at Dalhousie University.
- Travel to attend site visits, program workshops, or for collaborations as directed.
- Publish research results in appropriate journals and other recognized media.

Qualifications:
Candidates must hold a Ph.D. in mathematics or a closely related area with at least five years of related research experience in category theory, formal logic, and quantum computing. Experience in categorical quantum mechanics, topological semantics, modal logic, dynamic quantum logic and quantum contextuality is also required.

Status: 37.5 hours/week
Pay Scale: $37,050 - $50,000 per annum, plus additional benefits (to commensurate with experience)
Duration: August 1, 2019 to September 29, 2020

Deadline for application: April 25, 2019

Interested parties should forward a cover letter and current CV to:

Ann Bannon
Administrator
ann.bannon@dal.ca

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.

We thank all applicants, however, only candidates selected for an interview will be contacted.

Dalhousie University is committed to fostering a collegial culture grounded in diversity and inclusiveness. The university encourages applications from Aboriginal people, persons with a disability, racially visible persons, women, persons of minority sexual orientations and gender identities, and all candidates who would contribute to the diversity of our community. For more information, please visit www.dal.ca/hiringfordiversity