Canada Research Chair (Tier II) in Complex Neural System Modelling, Department of Physics and Astronomy

University of Calgary believes that a respectful workplace, equal opportunity and building a diverse workforce contribute to the richness of the environment for teaching, learning and research, and provide faculty, staff, students and the public with a university that reflects the society it serves. The Faculty of Science is committed to showing leadership in diversity, equity and inclusion, and nurturing a healthy and respectful workplace environment for all.

Applications are invited from emerging leaders in the area of **Complex Neural System Modelling**, for a **Tier II Canada Research Chair** position in the **Faculty of Science** at the **University of Calgary**. The successful candidate will be appointed at the rank of **Assistant Professor (tenure-track)** and will be nominated for a CRC Tier II Chair, which would provide a research stipend and protected time for research for up to 10 years. In alignment with the University's Eyes High strategic vision and in support of its strategic academic and research priorities of interdisciplinarity, leadership, internationalization and creation of a dynamic research environment, the incumbent will join a university-wide community of world-class scholars under the Brain and Mental Health research strategy and the newly established Computational Neuroscience Platform. Current faculty members in that area maintain research programs in complexity science and critical brain dynamics, network neuroscience and complex network theory, dynamical systems theory and computational neuroscience, biological learning and memory formation, neuromorphic systems and nanotechnology, large data and bioinformatics, medical image processing and machine learning, and quantum neuroscience.

The Chair will be based in the Faculty of Science with an appointment expected to be in the Department of Physics and Astronomy, however an appointment in the Department of Computer Science, the Department of Mathematical Sciences or the Department of Biological Sciences, or a cross-appointment between two Departments is also possible. The successful applicant will have the opportunity to be part of a prolific and diverse research environment provided by the Faculty of Science, including the Complexity Science Group, and the internationally recognized Hotchkiss Brain Institute, with access to key technology platforms, state-of-the-art core infrastructure such as neuroimaging, neurophotonics, neurostimulation and advanced microscopy as well as large world-class data sets (e.g. genomics, proteomics, cellular imaging, electrophysiology, and neuroimaging). Outstanding opportunities for collaboration are available with established research programs in diverse areas of complexity science, network science, neuroscience, and imaging, and the successful applicant is expected to take advantage of them and actively participate in and integrate well with the Computational Neuroscience Platform.

The successful candidate must have a strong research record related complex neural system modeling and is expected to establish an independent research program related to the fundamentals of brain and neural dynamics at the intersection of physics, complexity science and neuroscience. Theoretical, mathematical, computational and data-driven areas of interest in modeling complex neural systems include dynamics and circuitry of biological neural networks, information processing and biological computation as well as plasticity and learning. The successful candidate is also expected to provide high-

quality teaching at both the undergraduate and graduate levels, and will actively recruit and supervise graduate students. Peer-reviewed external funding is expected to be obtained and sustained. Industrial partnerships are also encouraged, as appropriate.

Applicants must possess a PhD in Physics (or equivalent) at the time of appointment. Postdoctoral experience is required. Successful applicants must be enthusiastic about contributing to teaching and research, and demonstrate the potential to excel in both. Specifically, the successful candidate must convincingly demonstrate evidence of the following:

- Leadership in a research or research team setting
- Excellent emerging world-class research and research creativity
- Outstanding track record of publications in high quality journals
- Ability to develop an original, innovative and productive externally-funded research program
- Potential to achieve international recognition in their field in the next five to ten years
- Potential to attract, develop and retain excellent trainees, students and future researchers
- Potential to deliver high-quality instruction at the university level
- Potential to employ innovative, student-centred teaching and assessment methods
- Capacity to collaborate and work well as part of a team

Tier II Chairs are intended for exceptional emerging scholars (i.e., candidates must have been an active researcher in their field for fewer than 10 years at the time of nomination). Candidates who are more than 10 years from having earned their highest degree and who have had career breaks, such as maternity, parental, or extended sick leave, clinical training, etc., may have their eligibility for a Tier II Chair assessed through the program's Tier II justification process. Please contact UCalgary's Office of Research Services for more information: ipd@ucalgary.ca. Further information about the Canada Research Chairs Program can be found on the Government of Canada's CRC website, including eligibility criteria.

The Department of Physics and Astronomy is one of Canada's leaders, with demonstrated excellence in teaching and research. It has sizeable undergraduate and graduate programs, state-of-the-art laboratories, and successful multi-disciplinary linkages. It plays a leadership role within the Computational Neuroscience Platform. Further information is available at http://www.phas.ucalgary.ca and https://www.ucalgary.ca/complexity/.

Inspired by the vision "Healthy Brains for Better Lives", the strategic goals of the Hotchkiss Brain Institute (HBI, http://www.hbi.ucalgary.ca/our-research) are to make key, internationally recognized discoveries and transform clinical research in the neurosciences and mental health. To achieve this goal the HBI has created a "NeuroDiscovery Framework", which aligns research within three themes of Brain & Behaviour, Neural Injury & Repair and Healthy Brain Aging. Each theme is composed of Brain and Mental Health Teams, each organized in a translational continuum, which includes basic, clinical, population and public health researchers. The teams take advantage of key technology platforms, core facilities and support programs that allow them to pursue their research goals. This highly enriched environment is ideally suited to foster research excellence.

Interested individuals are encouraged to submit an application online. Your application should include the following:

- Curriculum vitae, including a complete publication list and the name and contact information of three references
- Concise description of past research and future research plan
- Statement of teaching philosophy

To receive full consideration, applications should be received by March 30, 2021.

Questions may be addressed to:
Dr. David Knudsen, Head, Department of Physics and Astronomy
Email: knudsen@ucalgary.ca

The University of Calgary recognizes that candidates have varying career paths and that career interruptions can be part of an excellent academic record. Candidates are encouraged but not required to provide any relevant information about their experience and/or career interruptions to allow for a fair assessment of their application. Selection committees have been instructed to give careful consideration to, and be sensitive to the impact of career interruptions, when assessing the candidate's research productivity.

The University of Calgary recognizes that a diverse staff/faculty benefits and enriches the work, learning and research experiences of the entire campus and greater community. We are committed to removing historical barriers that have been encountered by some people in our society. We strive to recruit individuals who will further enhance our diversity and will thrive academically and professionally while they are here; in particular, we encourage members of the four designated groups (women, Indigenous People, persons with disabilities and members of visible minorities) to apply. All qualified candidates are encouraged to apply; however Canadians and permanent residents will be given priority. To ensure a fair and equitable assessment, we offer accommodation at any stage during the recruitment process to applicants with disabilities. Questions regarding diversity or requests for accommodation can be sent to Human Resources (hrhire@ucalgary.ca).

The University of Calgary has launched an institution-wide Indigenous Strategy in line with the foundational goals of Eyes High, committing to creating a rich, vibrant, and culturally competent campus that welcomes and supports Indigenous Peoples, encourages Indigenous community partnerships, is inclusive of Indigenous perspectives in all that we do.

Posting Date: February 25, 2021
Closing Date: March 30, 2021

To learn more about academic opportunities at the University of Calgary and all we have to offer, view our **Academic Careers website**. For more information about the Faculty of Science visit **Careers in the Faculty of Science**.

About the University of Calgary

Through our *Eyes High* vision we have fundamentally transformed the University of Calgary. We have raised our global profile, enhanced the quality of undergraduate and graduate education, promoted innovation and excellence in scholarly activity, and provided significant returns to the community and economy both locally and beyond. Eyes High 2017-2022 will leverage our momentum and aspirations to

be recognized as a top 5 research university in Canada, with a strong focus on student experience, campus culture and entrepreneurial thinking.

To succeed as one of Canada's top universities, where new ideas are created, tested and applied through first-class teaching and research, the University of Calgary needs more of the best minds in our classrooms and labs. We're increasing our scholarly capacity by investing in people who want to change the world, bringing the best and brightest to Calgary to form a global intellectual hub and achieve advances that matter to everyone.

About Calgary, Alberta

Calgary is one of the world's cleanest cities and has been named one of the world's most livable cities for years. Calgary is a city of leaders - in business, community, philanthropy and volunteerism. Calgarians benefit from a growing number of world-class dining and cultural events and enjoy more days of sunshine per year than any other major Canadian city. Calgary is less than an hour's drive from the majestic Rocky Mountains and boasts the most extensive urban pathway and bikeway network in North America.