Carnegie Mellon University

DIRECTOR

Carnegie Mellon University, Neuroscience Institute

Pittsburgh, PA

THE SEARCH

Carnegie Mellon University (CMU) seeks an intellectually broad, collaborative, and accomplished scientist-leader to serve as its next Director of the Neuroscience Institute (NI). Anchored in the birthplace of artificial intelligence and cognitive psychology, the Neuroscience Institute capitalizes on Carnegie Mellon's unparalleled strengths in the study of brain and behavior. The Director will have a singular opportunity to organize, inspire, and lead some of the world's most talented researchers at the intersections between cognitive psychology, neurobiology, computational and theoretical neuroscience, neuroengineering, machine learning, robotics, statistics, neurotechnology, and computer science.

Since its founding, the Neuroscience Institute has provided an exciting platform for groundbreaking critical inquiry in cognitive, computational, and systems neuroscience as well as neuroengineering. Its unique strength is defined by CMU's long-standing commitment to intellectual diversity, and a rich decades-long history of bringing faculty together to conduct multi-disciplinary work to advance the state of brain science.

The Neuroscience Institute's annual operating budget exceeds $3.6 million, with sponsored neuroscience research expenditures of $25 million conducted by its core faculty across the University. With the help of 28 core faculty, 57 graduate students, and 14 staff, the Institute is home to one of the world's most potent groups of scholars, a unique faculty-led enterprise of biologists, engineers, psychologists, behavioral, cognitive, and computational neuroscientists interested in the brain and behavior.

At this transformative juncture, the Institute seeks a Director who will guide the Institute's vision to be the preeminent international leader of advances in neural sciences. Building on the exciting momentum fostered by the founding Director and current Dean of Mellon College of Science (MCS), Dr. Barbara Shinn-Cunningham, the incoming Director will bridge across colleges and disciplines, including a robust partnership with the University of Pittsburgh through the 30-year-old joint Center for the Neural Basis of Cognition. The Director will work closely with several of the other six academic deans at CMU and the Provost to oversee the expansion of neuroscience-based research across the university.

The Neuroscience Institute supports neuroscience efforts across the campus, independent of administrative boundaries, and sits within the Dietrich College of Humanities and Social Sciences. Dually reporting to both the Dean of MCS, Dr. Barbara Shinn-Cunningham, as well as the Dean of Dietrich College, Dr. Richard Scheines, the Director will set research priorities, determine budget allocation to strategic priorities, and lead hiring activities in neuroscience.

The Director will be charged with providing visionary strategic leadership; supporting broad-ranging research initiatives; advancing the Institute's philanthropic and industry engagement; identifying and securing diverse research funding sources; and upholding the Institute's commitment to deepening interdisciplinary collaboration across and outside the university. The successful candidate will be a transparent communicator, an excellent relationship builder, and a leader who energetically pursues opportunities to mentor and guide faculty, staff, and students.

CARNEGIE MELLON UNIVERSITY

A member of the Association of American Universities (AAU), CMU is a global, research-intensive university with more than 16,600 students, 6,700 faculty and staff, and 127,000 active alumni. Since its founding in 1900, the University has been a birthplace of innovation. Its award-winning faculty members are renowned for inspiring students to think ambitiously and creatively, to interpret with insight, and to solve major scientific, technological, and societal challenges. As a result, its students are recruited by some of the most forward-thinking organizations throughout the world. The University has embraced a deep commitment to solving problems through collaborative integration of multiple perspectives and disciplines, with an emphasis on creativity, innovation, and the human element, to enable pervasive and sustainable societal impact.

Carnegie Mellon was founded on the principle of education as a force to enhance careers, lives, and communities, as reflected in Andrew Carnegie's oft-quoted words: "My heart is in the work." Students at Carnegie Mellon embrace a multi-faceted learning environment infused with opportunities for students to be engaged in formal and informal research, in project courses designed for interdisciplinary problem solving, and in learning opportunities in and out of the classroom, lab, studio, and stage. Seven schools and colleges comprise the University: College of Engineering, College of Fine Arts, Dietrich College of Humanities and Social Sciences, Heinz College of Information Systems and Public Policy, Mellon College of Science, School of Computer Science, and the Tepper School of Business.

Carnegie Mellon puts a strong emphasis on creativity – from art to robots to policy – to address cultural imperatives and enrich lives. It is a global leader in taking ground-breaking ideas quickly to market and in creating successful entrepreneurial ventures. It ranks first among U.S. universities without a medical school in the number of start-up companies created per research dollar spent since 2007. In addition, CMU spinoffs represent more than a third of the total companies created in Pennsylvania in recent years. Altogether, over 1,000 companies have formed based on CMU intellectual property, creating jobs across the U.S. and internationally.

NEUROSCIENCE INSTITUTE

The Neuroscience Institute was initially launched as CMU BrainHub℠ in 2015. At the time, it was CMU's first multi-disciplinary research partnership aimed at understanding the brain and how it gives rise to behavior. In 2018, with participation from the entire CMU community, the strategic planning for the Neuroscience Institute was completed, and all programmatic activities undertaken in CMU BrainHub℠ were then included under NI in the new administrative structure. Over the last seven years, NI grew through additional faculty hiring and expanded educational programming.

Today, the Neuroscience Institute's central mission is to conduct interdisciplinary research that harnesses CMU's core strengths in computation, cognitive science, machine learning, data science, biology, and engineering to understand and improve function in both healthy and diseased brains. It takes an entrepreneurial approach, inventing and applying the next generation of neural technologies and tools for real-world solutions. Academically, the Institute aims to create leaders with the cross-disciplinary skills and knowledge to use neural sciences to solve tomorrow's problems. The Neuroscience Institute's annual operating budget exceeds $3.6 million, with sponsored neuroscience research expenditures of $25 million conducted by its core faculty.

The Neuroscience Institute is affiliated with both the Mellon College of Science (MCS) and the Dietrich College of Humanities and Social Sciences. Among its 28 core faculty members are faculty from MCS, Dietrich, the College of Engineering, the School of Computer Science, and the College of Fine Arts. The Institute also includes 14 staff members, including the Executive Director, Gerry Balbier.

The Institute is also the home for the Center for the Neural Basis of Cognition (CNBC). Created in 1994, The CNBC is a joint venture between the University of Pittsburgh (Pitt) and Carnegie Mellon University that leverages the strengths of Pitt in basic and clinical neuroscience and those of CMU in cognitive and computational neuroscience. This 30-year research and educational partnership between the universities now has over 170 active faculty, postdocs, and students. The CNBC is a vital training partner within the Neuroscience Institute and aims to sustain its position as the world's most exciting and neighborly playground for pioneering research and training in the neural basis of cognition.

Research

The Director will support an ecosystem of inquiry, advancement, and application across four key research areas that are distinctive to CMU and its intellectual strengths: Cognitive Neuroscience, Computational Neuroscience, Neuro Technology and Engineering, and Systems Neuroscience. Cognitive Neuroscience research at the Institute is strongly interdisciplinary with an emphasis on the precise specification of the mechanisms underlying mental processes and behaviors, often incorporating neuroscientific data and computational models. Computational neuroscience brings many ideas and tools associated with computation to the study of the nervous system. Neuro Technology and Engineering at the Institute focuses on the development and application of technologies that emerge at the interfaces between engineering, biological sciences, computer science, and psychology. And finally, Systems Neuroscience

research at the Institute is centered on understanding of how the diversity of discrete neural cell types in the cerebral cortex and basal ganglia give rise to perception and behavior.

Academics

The Neuroscience Institute administers two Ph.D. programs, the Program in Neural Computation (PNC) and the Program in Systems Neuroscience (PSN); in addition, PNC offers three joint PhDs, with the departments of Machine Learning (School of Computer Science or SCS), Statistics and Data Science (Dietrich College), and Robotics (SCS). All programs benefit from a close relationship with the Center for the Neural Basis of Cognition (CNBC), as PNC and PSN students are by extension members of the CNBC. Students can leverage the strengths of CMU and Pitt to support a coordinated cross-university educational experience of international stature. Launched in 2007, the PNC hosts a group of 37 students, training them in the application of computational, mathematical, and statistical methods to problems in neuroscience. Launched in 2021, the PSN currently enrolls 20 students. The program trains scientists in the growing field of quantitative systems neuroscience and provides them with an essential background in experimental neuroscience as well**.** MD-PhD students from the University of Pittsburgh School Medicine can opt to apply to earn their PhDs from either PNC or PSN.

ROLE OF THE DIRECTOR

Reporting to the Deans of MCS and Dietrich College, the Director serves as the chief spokesperson and executive officer of the Neuroscience Institute. The Director will work in partnership with the Executive Director to oversee program delivery, strengthen research collaborations, and develop resources. The Director will also be responsible for partnering with faculty, staff, and other colleagues--within the Institute and across the university--to develop vision and strategy as well as ensure the vitality and long-term success of the Institute.

KEY OPPORTUNITIES FOR THE DIRECTOR

Provide strategic and visionary leadership

The Director will be expected to provide knowledgeable, experienced, and proven leadership to the Neuroscience Institute, championing the distinctive role it plays as the premier neuroscience research hub within CMU's ecosystem. The Director will work with faculty and university leadership to define and execute a vision for the Institute that creates an intellectual home for neuroscience investigators and fulfills its most ambitious aspirations for impact in the field. The Director will inherit a strong foundation of existing academic and research programming and will be tasked with effectively guiding the students, staff and faculty who bring it to life.

Support a transformative research portfolio

The Institute draws on Carnegie Mellon's strengths to create a distinctive environment for integrating cognitive science, machine learning, engineering, computational neuroscience, and systems neuroscience to drive discovery. The Director will nurture a research culture where foundational science and translational impact intersect. To foster an environment conducive to excellence in research, the Director must bring an intellectual curiosity and an appreciation for a breadth of research, encompassing human cognitive and animal-based wet-lab experimental neuroscience, computational and theoretical neuroscience, and neuroengineering and technology development. With emerging strengths in NeuroAI and Neurotechnology, the Director will provide critical and timely leadership to both enhance the Institute's scientific visibility and expand its real-world influence. From brain-computer interfaces to next-generation diagnostic tools, the Neuroscience Institute is well positioned to define the future of computationally driven neural technologies.

Deepen interdisciplinary collaboration across CMU's research ecosystem

The Neuroscience Institute thrives as a broad network of multiple disciplines, where impact is amplified through continuous collaboration. The Director must bring the tools and experience necessary to further strengthen the underpinnings and collaborative pathways at CMU, enabling the Institute to advance its cross-disciplinary thrusts. The Director will build relationships across campus and develop creative solutions to barriers that impede interdisciplinary research activities. The Institute is already engaged in strong partnerships across campus; the Director remains responsible for nurturing these relationships while identifying new areas for connection. Beyond the primary sponsoring schools, the Director will work closely with the deans of Engineering and Computer Science and seize additional opportunities to expand existing ties with departments such as Robotics, Mechanical Engineering, Biomedical Engineering, and the Language Technologies Institute.

Advance the Institute's external visibility and translational impact

Serving as the chief ambassador and spokesperson for the Institute, the Director will play a central role in cultivating strategic relationships with philanthropic donors, industry partners, and the broader scientific community to extend the Institute's impact. The next Director will be expected to work closely with CMU Advancement to engage new donors and cultivate philanthropic partnerships. As the Institute continues to grow its translational research sector, the Director will also be charged with accelerating commercial and applied research initiatives to connect with industry. The Director will strengthen ties with industry partners to actively pursue commercialization opportunities for innovative technologies and methodologies developed at the Institute.

Oversee strategic resource investment

Additionally, the Director will be responsible for managing the finances of the Neuroscience Institute and optimizing its resources to achieve its strategic goals. The Director has authority over the annual operating budget and long-term financial plan, which includes endowment resources and indirect grant support. In the current environment, the Director will need to be nimble and adroit, creatively identifying potential revenue sources and novel funding strategies. At the same time, the Director will be a key figure working with the university to outline facilities, equipment, and other resource needs to continue the growth and development of the broader neuroscience effort.

Support and mentor a talented and multidisciplinary body of students, staff, and faculty

A crucial measure of the Director's success will be their ability to recruit, retain, mentor, and develop Institute members. NI is a vibrant hub of neuroscience activity, and the Director is charged with empowering faculty and students to do pioneering work. As the Institute leader, the Director must supervise and advise staff while fostering cohesion across a community that spans disciplines, roles, and research areas. One of the Director's core responsibilities is to be a champion of student success, committed to enhancing academic programs and addressing the distinct needs of graduate training. The Director will also be intentional in advocating for student, staff, and faculty professional development and success, emphasizing values that promote a fair, inclusive, and collegial environment.

QUALIFICATIONS AND CHARACTERISTICS

The successful candidate will bring many of the following qualifications, professional experiences, and personal attributes:

- Visionary leader with demonstrated record of innovative, collaborative and forward-looking leadership in a distinguished research setting;
- PhD degree;
- Distinguished record of achievement and professional credentials consistent with appointment at the rank of full professor;
- Demonstrated success in promoting, fostering, and conducting funded research, particularly cross-disciplinary research;
- An established record of securing extramural federal and/or private funding for research and training programs;
- Proven commitment to access and inclusion, including the recruitment and retention of an excellent faculty, staff, and student population;
- Deep commitment to supporting career development and empowering the success of other scientists;
- A personal appreciation for and understanding of the wide variety of disciplines represented by NI faculty;

- An entrepreneurial track record and/or record of partnership development with industry or corporate partners; and
- Strong and persuasive communications skills and the ability to advocate for the importance of neuroscience to a variety of stakeholders, internal and external.

PITTSBURGH

Carnegie Mellon is deeply engaged with the City of Pittsburgh and the greater Pittsburgh region to the benefit of the University and the region. Over the last decade, as the area has established its identity as a technology hub for both startups and large corporations, that relationship has grown even stronger. Low costs of living, networking opportunities, small business accelerators, and an innovative community make the city appealing to entrepreneurs, especially recent graduates. There is a high density of software and robotics companies, in particular, that contribute to the growing technology and innovation ecosystem in the region, including ANSYS, Bosch, Google, Argo, and others, many with CMU roots and partnerships. The city is also home to the Department of Energy National Energy Technology Laboratory.

Well known for its quality of life and frequently ranked among the most livable cities in the nation, Pittsburgh features a highly educated population and an increasingly vibrant dining and social scene. The city features a suite of cultural institutions, four major professional sports teams, and a gateway to mountains, whitewater, and other outdoor activities. Many CMU faculty live close to campus, enjoying short walks or bike rides to work, a range of educational options for their children, nearby public transportation, parks, restaurants, and shopping, all within walking distance of home. CMU faculty, staff, and students increasingly enjoy a region with growing vitality and national reputation.

APPLICATIONS, INQUIRIES, AND NOMINATIONS

Screening of complete applications will begin immediately and continue until the completion of the search process. Inquiries, nominations, referrals, and CVs with cover letters should be sent via https://www.imsearch.com/open-searches/carnegie-mellon-university-neuroscience-institute/director. Electronic submission of materials is strongly encouraged.

John Muckle, Partner
Ibaad Nazeer, Associate
Kira Hamilton, Senior Search Coordinator

Isaacson, Miller

genetic information. Furthermore, Carnegie Mellon University does not discriminate and is required not to discriminate in violation of federal, state, or local laws or executive orders. The university's Discriminatory and Sexual Misconduct Policy contains grievance procedures that provide for the prompt and equitable resolution of Complaints alleging any action which would be prohibited by this Policy. Inquiries concerning the application of and compliance with this statement should be directed to the Office for Institutional Equity and Title IX, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA 15213, telephone 412-268-7125.