Position Specification

Carnegie Mellon University
Glen de Vries Dean, Mellon College of Science

Russell Reynolds ASSOCIATES

Carnegie Mellon University

A member of the Association of American Universities (AAU), Carnegie Mellon University (CMU) is a global, research-intensive university with more than 16,700 students, 6,300 faculty and staff, and more than 118,000 living 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.

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. CMU has its main, 157-acre campus in Pittsburgh, satellite campuses in Silicon Valley, Doha, Qatar, and Kigali, Rwanda, and degree-granting programs domestically (including Los Angeles, New York, and Washington, DC) and around the world (including Japan, Portugal, and Latin America).

Carnegie Mellon has been home to 20 Nobel Laureates, 26 members of the American Academy of Arts and Sciences, 68 members of the National Academy of Engineering, 22 members of the National Academy of Sciences, six members of the National Academy of Medicine, one member of the National Academy of Public Administration, 13 Turing Award recipients, 22 Guggenheim Fellows, two MacArthur Foundation Fellows, one National Book Award winner, two National Medal of Science winners, and six National Medal of Technology and Innovation winners. Former faculty and alumni have won 13 Academy Awards, 142 Emmy Awards, and 52 Tony Awards.

Carnegie Mellon University is ranked by *U.S. News and World Report* among the top 25 national universities and top five most innovative universities. In addition, many CMU schools and departments are ranked within the top 25 according to *U.S. News and World Report*: undergraduate business programs (#7), undergraduate engineering programs (#8), undergraduate computer science (#2); graduate business (#18 for full-time and #9 for part-time), graduate engineering (#5); mathematics (#20); computer science (#4); statistics (#5); fine arts (#7); economics (#21); public affairs (#19); and psychology (#23). Particularly impressive is the fact that many areas at CMU are rated #1 at either the college level (computer engineering, artificial intelligence, cybersecurity, mobile/web applications, software engineering) or the graduate level (artificial intelligence, information systems, programming language, time-based media/new media, information technology management).

Carnegie Mellon University 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. Known for its innovative culture, CMU has launched more than 130 companies. 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 based on University technologies in recent years. Altogether, CMU has helped to greenlight more than 1,000 companies, creating jobs across the U.S. and internationally. In early 2011, the World Economic Forum invited CMU to become a permanent member of its Global University Leaders Forum. Business members of the Forum include the world's top 1,000 companies, which drive the economy forward and collaborate on shaping global, regional, and industry agendas. CMU is one of only 29 universities in the world – and one of 12 universities in the U.S. – to be invited to join.

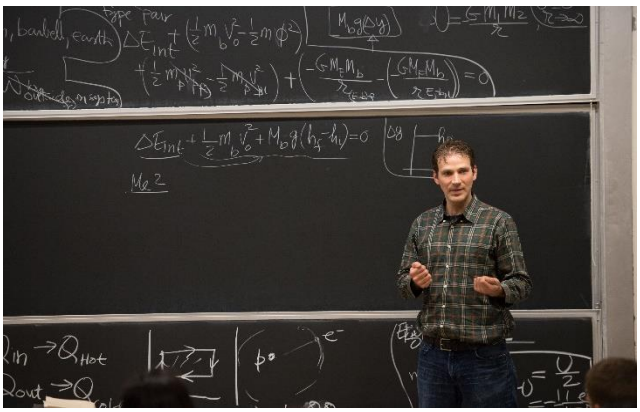
Carnegie Mellon was founded on the principle of education as a force to enhance careers, lives, and communities. Teaching and learning remain core to the mission, and faculty and students jointly work on projects and activities with broader real world meaning. The curriculum is infused with opportunities 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. Students at Carnegie Mellon embrace this multi-faceted learning environment, living the oft-quoted words of Andrew Carnegie, "My heart is in the work."

Mellon College of Science

The Mellon College of Science's mission is three-fold: to harness the remarkable research strengths and collaborative culture at Carnegie Mellon University to support foundational discovery and solve issues of global significance; to provide students with a rigorous education that provides in-depth skills within their discipline, exposure to a breadth of scientific fields, and the knowledge and ability to identify and address significant and challenging problems; and to tell the world about the collaborative scientific and educational culture of Carnegie Mellon University and how it harnesses this productive culture to achieve transformational results. MCS operationalizes its mission every day through its commitment to integrated research and education that has solidified its stellar reputation.

MCS hosts many programs and research centers that cross disciplines and is home to the Pittsburgh Supercomputing Center and four departments — biological sciences, chemistry, mathematical sciences, and physics. The College also offers interdisciplinary degrees and programs across CMU with the Tepper School of Business, School of Computer Science, Heinz College of Information Systems and Public Policy, Dietrich College of Humanities and Social Sciences, and the University of Pittsburgh. MCS's highly competitive programs empower the next generation of leaders and discoverers through unsurpassed education in a uniquely collaborative community.

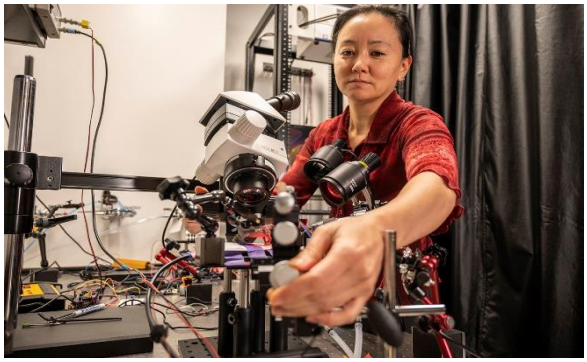
The Mellon College of Science′s four departments have risen in *U.S. News & World Report* graduate program rankings over the last 12 years. In 2023, the Biological Sciences was ranked 37th, Chemistry 38th, Mathematical Sciences 20th, and Physics 28th. Additionally, the Department of Mathematical Sciences is ranked 3rd in Discrete Mathematics and 10th in Applied Mathematics by *U.S. News & World Report*. In 2022, *Gizmodo* recognized the Department of Physics as one of the top programs in astronomy and astrophysics. The Master of Science in Computational Finance program is fourth in Quantnet′s ranking of best financial engineering programs.



The Mellon College of Science is committed to providing students with a rigorous, supportive academic and research environment. MCS is home to 879 undergraduate, 151 master's, and 275 PhD students. An MCS education prepares graduates to thrive in the 21st-century scientific and social world they will face and shape. MCS's innovative core curriculum considers holistic development and fosters student growth in four dimensions—scholar, professional, citizen, and person—to give students a multi-dimensional undergraduate experience.

MCS is leading programs aimed at attracting promising young scholars from underrepresented backgrounds to the sciences. Students have abundant opportunities to enrich their experiences by participating in thoughtful programs such as the NSF ASCEND Mentor Network, Summer Undergraduate Applied Mathematics Institute, and Summer Academy for Math and Sciences. Undergraduate students can also participate in the Data Analytics for Science Immersion Experience (DASIE). The DASIE program is executed through partnerships with Dow Chemical and Accenture and is designed to bring together students from outside of CMU to build a pipeline of future science leaders with advanced data skills.

The Mellon College of Science is renowned for nurturing and producing innovators and forward-thinkers. MCS has been home to 10 of the University's 20 Nobel Laureates, including John Nash Jr. who earned his bachelor's and master's degrees in mathematics in 1948 and won the Nobel Prize in Economic Science in 1994. MCS alumni and faculty have invented materials and processes that have made a profound impact, such as Kevlar® and CyDyes™. A new partnership to build the world's first academic cloud lab with an alumni-led company is fostering an environment where science is accessible, reliable, and limited only by ideas.



MCS will continue to play a leading role in the University's ambitious future of science initiative. The decade-long initiative will revolutionize the future of science, accelerate the University's leadership in scientific discovery and education, and lead to groundbreaking innovations that will benefit all of humankind. Carnegie Mellon University is committed to remaining on the cutting-edge of science and has devoted more than $250 million to the initiative. MCS has and will continue to be a launch pad for new inventions, inspired thinking, and investment. The Mellon College of Science represents a fertile space where ideas and new creations can take root and grow. MCS is playing a leading role in educational and research partnerships such as the CMU Cloud Lab, the Pittsburgh Supercomputing Center, the Neuroscience Institute, and new, collaborative space in Richard King Mellon Hall of Sciences.

The CMU Cloud Lab

CMU is exploring new frontiers in automated science through the state-of-the-art Cloud Lab, which opens in Fall 2023. Based on a concept pioneered by two MCS alumni through their company Emerald Cloud Lab (ECL), the CMU Cloud Lab is the world's first academic cloud lab that allows you to remotely control a complete life sciences and chemistry laboratory from your computer. The lab will provide a universal platform for artificial intelligence-driven experimentation, changing how academic laboratory research and education are done, and accelerating the pace of discovery at the University. Researchers using the Cloud Lab order experiments over the internet, and a combination of robotic instrumentation and trained technicians in the Cloud Lab perform experiments exactly as specified. Data is then returned to the researchers, typically within a day. CMU has invested $40 million to build the 16,000-square-foot CMU Cloud Lab.

The CMU Cloud Lab draws on the University's world-leading expertise in areas such as artificial intelligence, machine learning, robotics, biological sciences, nucleic acid chemistry, materials science, and computational biology—many of which are also the strengths of the Mellon College of Science. The CMU Cloud Lab will be prioritized for the use of the CMU research community and for CMU educational purposes. The Cloud Lab has already been used to teach courses for both undergraduate and graduate students, and conduct faculty research. The Cloud Lab represents the next evolution in scientific research, and automated science will continue to be a major priority for the College.

The Pittsburgh Supercomputing Center

The Pittsburgh Supercomputing Center, one of four NSF national computing centers, is part of the Mellon College of Science. PSC supports computing for researchers across the country and has its own active research programs in life sciences, AI, and quantum information. They are recognized for their national cyber-training programs.

Since its inception in 1996, more than 9,000 principal scientists and engineers (totaling 14,251 grants and 44,632 users) at nearly 1,500 institutions and research centers in 53 states and territories have used PSC computing resources. With 70 technical and administrative staff, and an annual budget of $16.5 million, PSC advances the state-of-the-art in high-performance computing, communications, and data analytics, and offers a flexible environment for solving the largest and most challenging problems in computational science.

The Neuroscience Institute

The Neuroscience Institute (NI) was launched in 2018 to expand multi-disciplinary research in basic brain science and its applications. Advances in modern neuroscience demand intersecting expertise from computer science, statistics, engineering, machine learning, cognitive science, and biology—areas in which Carnegie Mellon University excels. Administratively, the Neuroscience Institute is affiliated with both the Mellon College of Science and the Dietrich College of Humanities and Social Sciences, but NI brings together faculty and students from across the University, including from MCS, Dietrich, the College of Engineering, the School of Computer Science, and the College of Fine Arts.

The Richard King Mellon Hall of Sciences

Planning is underway for the Richard King Mellon Hall of Sciences, a next-generation home for the future of science at CMU. Made possible by a $75 million lead grant by the Richard King Mellon Foundation, the Richard King Mellon Hall of Sciences will be designed and built with flexibility in mind, allowing labs to be configured and reconfigured to quickly mobilize to answer emerging problems and respond to the evolution of scientific discovery.

Co-located on site will be researchers and educators from both the Mellon College of Science and the School of Computer Science, as well as the University′s Institute for Contemporary Art, creating an environment for partnership across disciplines unlike anywhere else on campus — and even around the world. Faculty, staff and students from the Departments of Biological Sciences and Chemistry, Neuroscience Institute, Department of Computational Biology, the Language Technologies Institute, and the Department of Machine Learning will employ artificial intelligence, data analytics, and foundational science to solve previously unsolvable challenges. The cutting-edge facility will create new connections and remove boundaries between researchers and disciplines and will bring together researchers from across the University working in the foundational sciences, machine learning, computer science and data analytics. It is slated to open in 2027.

The Role of the Dean of the Mellon College of Science

Carnegie Mellon University seeks a successful scholar and entrepreneurial leader who is able to thrive in an innovative and collegial environment that values academic excellence, interdisciplinary research, and making a real-world impact. As the chief academic and administrative officer of the Mellon College of Science, the dean reports to the Provost and serves as an essential member of the University′s leadership team. The dean is responsible for the academic and administrative leadership of the College and will provide visionary leadership and set the strategic direction for the College while building on established investments in automated science and the future of science initiatives. The dean of MCS will advance the College's mission and operations by overseeing administration, personnel, fundraising, alumni relations, budgeting and finance, academic programs, and marketing and communications. The dean will be passionate, inspiring, innovative, and forward thinking about science education and research, seizing opportunities to build and grow MCS. The dean will oversee an operating budget of approximately $120 million and will lead a team of approximately 20 dedicated and experienced individuals.

This is a unique and exciting opportunity to join an accomplished university and its continued remarkable upward trajectory, led by a strong executive leadership team and a highly collaborative council of college deans.

Key Priorities

The next dean will oversee the daily responsibilities of the Mellon College of Science and will focus on the following opportunities:

- Launch a strategic planning process that positions MCS as a national driver of ground-breaking science;
- Lead the "Future of Science" initiative within MCS and at the University level;
- Advance the Mellon College of Science's reputation and raise its prominence nationally;
- Increase research productivity and sponsored research as well as incentivize collaboration and interdisciplinary work;
- Manage space needs including the transition to the new Richard King Mellon Hall of Sciences building and the reconstitution and use of the existing space;
- Recruit, develop, retain, and support talented and diverse faculty, staff, and students;
- Maintain commitment and drive outcomes in diversity, equity, inclusion, and belonging;
- Foster a collaborative and collegial community among faculty, staff, and students;
- Support the growth and enhancement of master's programs, including online programs;
- Invest in and support the growth, development, and adoption of the CMU Cloud Lab facilities, in collaboration with the School of Computer Science and College of Engineering; and
- Engage in fundraising and resource generation for key initiatives.

Qualifications

The dean should demonstrate the qualifications and personal characteristics that are well-matched with the University′s values, strengths, and aspirations. The search committee seeks strong candidates with the following experience, abilities, and professional and personal attributes:

- A recognized thought leader in their field with academic credentials, including a Ph.D. or other relevant degree, and a record of scholarship sufficient for appointment as a tenured full professor;
- Ability to set and articulate vision and strategy to a wide range of constituents and to engage them in its implementation;
- An established record of strong, collaborative, and forward-looking leadership, along with an empathetic, creative, and transparent leadership style that fosters an environment of shared faculty governance;

- An ability to inspire and champion a futuristic vision and to galvanize positive change in an academic setting;
- An interest in—and appreciation for—emerging trends in automated science;
- A genuine commitment to the teaching and research missions;
- Experience leading large-scale, externally funded projects;
- High emotional intelligence and strong interpersonal skills, including the ability to thoughtfully engage and motivate faculty, staff, and students and create a supportive community;
- The ability to serve as the chief advocate and a cultivator of teams;
- A demonstrated record of ensuring the equitable treatment of individuals and constituencies;
- Successful fundraising experience or related skills that would suggest high potential in this regard; and
- Oral and written communication skills that include the ability to listen actively and adapt communication to various audiences.

Carnegie Mellon University Leadership

President, Farnam Jahanian

A nationally recognized computer scientist, entrepreneur, public servant, and higher education leader, Jahanian brings extensive leadership and administrative expertise to Carnegie Mellon, and has advanced a number of key priorities at the university and in higher education more broadly. He drives important national and international conversations and initiatives aimed at helping higher education adapt to the future of work in the age of automation and artificial intelligence, and elevating the role of universities in expanding the footprint of U.S. innovation. During his tenure at CMU, the university has also undergone the largest expansion of campus infrastructure in its history, including significant renovation of education and learning spaces, a re-envisioning of the residential experience, and a new, state-of-the-art maker ecosystem. He has spearheaded efforts to enhance the overall CMU experience for students, with a focus on student success, holistic health and wellbeing, and support for a diverse and inclusive climate. He has also expanded partnerships that advance the research mission of the university and is leading a $2B fundraising campaign, the largest in the university's history, which launched in October 2019.

He first joined CMU as vice president for research in 2014, where he was responsible for nurturing excellence in research, scholarship, and creative activities. In his role as provost and chief academic officer from May 2015 to June 2017, Jahanian had broad responsibility for leading CMU's schools, colleges, institutes, and campuses and was instrumental in long-range institutional and academic planning and implementation.

Prior to coming to CMU, Jahanian led the National Science Foundation Directorate for Computer and Information Science and Engineering (CISE) from 2011 to 2014. He guided CISE, with a budget of almost $900 million, in its mission to advance scientific discovery and engineering innovation through its support of fundamental research. Previously, Jahanian was the Edward S. Davidson Collegiate Professor at the University of Michigan, where he served as chair for Computer Science and Engineering from 2007 to 2011 and as director of the Software Systems Laboratory from 1997 to 2000.

Provost, James H. Garrett, Jr.

A member of the faculty since 1990, James H. Garrett, Jr. was appointed Provost and Chief Academic Officer in 2019. Prior to that, he was named Dean of Carnegie Mellon University's College of Engineering in 2013. Preceding that, he spent six years as head of Carnegie Mellon's Department of Civil and Environmental Engineering.

As Provost and Chief Academic Officer, Garrett continues to partner with deans, administrative leaders, faculty, staff and students across campus to further several critical university initiatives, including investing in access and affordability,

enhancing the student experience, expanding the University's global education strategy, and using innovation and technology to enhance learning.

Garrett is Carnegie Mellon plaid through and through, having received his B.S. ('82), M.S. ('83), and Ph.D. ('86) degrees in Civil and Environmental Engineering from the institution. He joined the faculty of the College as an assistant professor in 1990 and was promoted to full professor in 1996. Garrett has served in other administrative roles including Associate Dean for Graduate and Faculty Affairs (2000-2006) and Acting Dean (2004), as well as faculty co-director of the Smart Infrastructure Institute, a research center aimed at developing sensing technology for construction and infrastructure systems.

Throughout his research career, Garrett focused on how sensors and data analytics can make our cities more adaptive and efficient. This approach aims to give built infrastructures the ability to detect and report on problems directly to the humans charged with maintaining those structures, allowing for more proactive and cost-effective infrastructure management.

Among his many recognitions and awards, Garrett was elected as a fellow of the American Association for the Advancement of Science in 2016, awarded the title of Distinguished Member of the American Society of Civil Engineers in 2018, and elected to the National Academy of Construction in 2020.

The City of Pittsburgh

Pittsburgh is in the midst of a remarkable transformation from an industrial capital to a center of education, medical research, and new technology. The city hosts a high concentration of diverse and influential nonprofits and, as an international center of emerging information technology, is home to many small start-up companies, one of Google′s national offices, Facebook′s Oculus virtual reality research center, and Uber′s autonomous vehicles development effort. Pittsburgh also is emerging as a leader in advanced manufacturing technologies and nanotechnology. While still a work in progress, the city′s reinvention of itself has garnered widespread attention and has become a model for other cities seeking to replicate its success. As Rhode Island′s governor put it while on a fact-finding mission to study Pittsburgh′s economic renaissance, "Pittsburgh is an impressive model of how an old-economy steel town transformed itself into a cutting-edge medical and educational center of excellence." Further, a 2017 report from the Brookings Institution, "examines Pittsburgh′s unique opportunity to become a top global destination for technology-based economic activity and as a key part of Pittsburgh′s efforts to become a world-class innovation city."

Pittsburgh has all of the advantages of a large city in combination with the friendliness of the Midwest and the cultural sophistication of the East Coast. In 2022, *U.S. News & World Report* rated Pittsburgh among the best places to live in the U.S. Glassdoor named Pittsburgh the best city for jobs in both 2017 and 2018. The city boasts a wonderful array of distinctive neighborhoods and an abundance of residential choices ranging from unique lofts to living in the "country" while being only 20 minutes from the city. Housing is affordable and, as noted by *Forbes*, presents the second most stable housing market in the country. The city and its surrounding suburbs take pride in high-quality public, private, and parochial schools. Statistically, Pittsburgh is a safe city compared to other urban communities of its size. No longer a smoky steel town, Pittsburgh is clean and green and a model for its efforts to become pollution free.

Nomination and Application Procedure

Carnegie Mellon University invites inquiries, nominations, and applications for the position of dean of the Mellon College of Science. Interested candidates should confidentially submit a curriculum vitae and letter of interest (Adobe PDF files preferred) to CMU.MellonCOS@russellreynolds.com.

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Contact

Joi Hayes-Scott
Russell Reynolds Associates
1700 New York Avenue, NW
Suite 400
Washington, DC 20006-5208
Direct: +1-202-654-7816
joi.hayes@russellreynolds.com

Jett Pihakis
Russell Reynolds Associates
1700 New York Avenue, NW
Suite 400
Washington, DC 20006-5208
Direct: +1-202-654-7870
jett.pihakis@russellreynolds.com