

**Director of the Human-Computer Interaction Institute
Carnegie Mellon University
Pittsburgh, Pennsylvania**

The Search

Carnegie Mellon University (CMU) seeks a visionary and highly collaborative leader to serve as the Director of the Human-Computer Interaction Institute (HCII) in the School of Computer Science (SCS). This is an exceptional opportunity to lead the foremost Human-Computer Interaction program in the world in its research and education missions--developing the next generation of HCI scholars and continuing to transform the field. Carnegie Mellon's SCS, the nation's top-ranked computer science school, provides an unparalleled scaffold for HCII's pathbreaking research and is renowned for its collegial, innovative, and entrepreneurial environment, with seamless collaborations across departments, institutes, and with other Schools and Colleges at CMU. The Director will further enable HCII's faculty, staff, and students to push forward the boundaries of the field, connect with pioneering researchers across the School and the University, and solve some of the world's most challenging problems at the interface of society and computing.

The School of Computer Science at Carnegie Mellon University is a leading center for computer science research and education. With total annual research expenditures of nearly \$110 million (within a budget of approximately \$180 million), it currently enrolls over 2,300 students across three undergraduate majors, additional undergraduate programs, eight distinct PhD programs, and over 20 Masters programs. It is home to approximately 270 faculty and 540 staff across seven academic departments. Founded as the Computer Science Department in 1965, one of the world's first, it transformed into a School of Computer Science in 1988 with the prescient vision to lead the world in the study of computers and the technologies they enable. Since then, it has steadily grown in stature and impact. Today, it is widely recognized as one of the top computer science schools in the world, and it is tied for the #1 ranking among computer science organizations by *US News and World Report*.

Overseeing an operating budget of approximately \$14 million and annual research expenditures exceeding \$13 million, the Director of the HCII will lead its 39 faculty members into the Institute's next phase of growth. With the formal launch of the nation's first undergraduate degree in human-computer interaction, HCII will produce specialists with a strong foundational knowledge of computer science and wide-ranging skills in developing world-changing digital technologies. As these technologies continue to expand beyond mobile applications and websites into conversational interfaces, the internet of things, and augmented/virtual reality, the work of the HCII becomes ever more important. The Director will continue to provide ample research opportunities for students, nurture and cultivate talented graduate students and young faculty, and ensure that HCII continues to pioneer approaches to design-based, interdisciplinary computing research.

In this recruitment effort, Carnegie Mellon University has retained Isaacson, Miller, a national executive search firm, to assist the search committee. All applications, inquiries, and nominations, which will remain confidential, should be directed to the search firm as indicated at the end of this document.

Carnegie Mellon University

Formally established in 1967, Carnegie Mellon University (CMU) is a dynamic institution that has exceptional impact in the world relative to its size and endowment. Although it is among the youngest of the nation's top universities, CMU's extraordinary success emanates from its deeply held core values and a unique heritage of innovation. It is a place of creativity, pragmatism, and ambition, with a tradition of strategically focusing its efforts and resources in areas where it can lead, then pursuing those areas with startling intensity. CMU is firmly committed to academic freedom, tenure protection, and shared governance, providing a fertile environment for faculty success. The University facilitates collaboration across its seven schools and colleges through organizational mechanisms and incentives, such as numerous joint appointments and a dedication to recognizing contributions outside one's main field. CMU has long embraced diversity as a core value that is central and indivisible from the pursuit of intellectual and artistic excellence, and for more than two decades, it has made increasing diversity in every constituency and building a supportive and nurturing community a strategic priority.

A member of the AAU, CMU is a global, research-intensive university with more than 14,000 students, more than 110,000 living alumni, approximately 5,000 faculty and staff, and over 100 research centers. SCS plays a major role at CMU as an engine of innovation and catalyst of intellectual collaborations. Computer science is a connective thread that weaves through all corners of the campus, helping to create the distinctive collaborative culture, rich interdisciplinary environment, entrepreneurial climate, and technology orientation that characterize Carnegie Mellon. In 2020, *U.S. News & World Report* ranked CMU #25 among national universities, and many of its programs are among the top-ranked in the world. It is also ranked #1 in startups per research dollar among AAU universities.

For more information about Carnegie Mellon University, please visit: <https://www.cmu.edu/>

School of Computer Science

The School of Computer Science (SCS) embraces all facets of computing and is recognized globally as one of the leading institutions for computer science education and research. Over the last fifteen years, it has been consistently ranked first by *US News and World Report*, tied with Stanford, MIT, and the University of California, Berkeley. CMU's graduate programs in computer science consistently rank among the very best. A survey by the editors of *The Wall Street Journal* ranked the undergraduate computer science program number one in the United States among corporate recruiters. SCS is ranked number one in specialty areas such as artificial intelligence, machine learning, cybersecurity, and computational biology.

CMU helped define the field of computer science, and it continues to redefine and shape the field as computer science has become ubiquitous in academia and society. SCS faculty continue to drive the field forward and explore new directions, receiving considerable international recognition for their achievements. Twelve SCS faculty and alumni have won the A. M. Turing Award. Other honors include memberships and fellowships in the National Academy of Sciences, the National Academy of Engineering, the American Association for the Advancement of Science, the

Association for Computing Machinery, the Institute of Electrical and Electronic Engineers, and The Alfred P. Sloan Foundation.

The quality and influence of research in the SCS, conducted collaboratively and across disciplines, is an institutional hallmark. A commitment to making a difference in the world is central to the ethos of the School, which values user-interface and translational impact. SCS is also a place that makes big bets in its research agendas to support uncommon investigative areas, to start uncharted research areas, and to imagine projects far beyond what a single faculty member could accomplish alone. Funding is secured from government, nonprofit agencies, and industry partners; in FY2020, research funding totaled \$108 million. For more details of research activity across SCS, please visit: <https://www.cs.cmu.edu/research>.

Additionally, the new JPMorgan Chase & Co. AI Maker Space was added to the list of creative facilities available on CMU's campus in the Fall of 2021. This 1,900-square-foot facility, located in one of the newest, largest buildings, which houses the Tepper School of Business and Swartz Center for Entrepreneurship, was developed to concentrate on software development utilizing state-of-the-art hardware to educate and to complete projects.

The SCS attracts top students who are drawn to the rigor, distinctiveness, and reputation of its programs. It currently enrolls 2,385 students from around the world; sixty-two percent of whom are at the graduate level (masters 831, doctoral 659), and 37 percent undergraduate (895). The most subscribed undergraduate program is the Bachelor of Science in computer science. "Second" majors in human-computer interaction and robotics, as well as interdisciplinary majors in computer science and the arts, music, and technology, are increasingly popular. SCS is the first computer science school to offer an undergraduate degree in AI and Human-Computer Interaction, demonstrating SCS's commitment to leading the field forward.

The School is also a place of community, collaboration, and diversity of thought and background. It has built and continues to foster a supportive culture that brings out the best in people. SCS invented and adheres to the Reasonable Person Principle, which relies on mutual trust and support among all faculty, staff, and students. In recent years, the University overall, and SCS in particular, has made great strides in increasing the diversity of its faculty and students. Of particular note, 48 percent of SCS undergraduates are women, which is 2.3 times the national average. Committed to hiring diverse and talented faculty, staff, and executives, CMU is a founding member of a regional organization that offers job placement resources to two-career couples.

CMU also benefits from its ever-stronger relationship with the City of Pittsburgh and the greater Pittsburgh region. Over the last decade-plus, as the area has increased its footprint as a technology hub for both large enterprises and startups, the relationship has grown even stronger. Carnegie Mellon faculty, staff, and students enjoy living in a region with growing vibrancy and national reputation.

Human-Computer Interaction Institute

Founded in 1993, The Human-Computer Interaction Institute ([HCII](#)) holds the distinction of being the first stand-alone HCI program in the country and remains one of the few worldwide. It has gathered a cadre of exceptional scholars, researchers, and technicians in the field of Human Computer Interaction (HCI) who routinely discover tools and solutions at the intersection of psychology, computer science, design, and technology. Diverse interdisciplinary teams conduct

research in multifaceted areas that include learning science, transformative games, social computing and computer supported collaborative work, constructive design research, 3D fabrication and its applications, sensors and input devices, user interface software tools, and privacy and security.

The HCII currently houses 39 faculty members, 48 administrative and technical staff, 70 PhD students, and 78 master's students. It boasts a distinguished faculty body, approximately 39 percent of whom are women, which is the highest ratio among most computer science departments. Many of the HCII faculty are established leaders and pioneers of the field who have received many accolades for their ground-breaking work. These include six Association for Computing Machinery (ACM) Fellows and one distinguished ACM member, four Special Interest Group in Computer Human Interaction (SIGCHI) Lifetime Achievement Awards in research and one SIGCHI Lifetime Service Award, and ten current and former CHI Academy members. These senior faculty are joined by an amazing cohort of energetic early-career faculty recruited in the last few years, whose excitement and creativity bring in fresh perspectives and great potential for making a difference in the world.

Research

HCII has a long history of pushing the boundaries of research in human-computer interaction. Areas of focus include innovation in user-interface software tools, computer supported work, gesture recognition, data visualization, intelligent agents, human-robot interaction, visual interface design, intelligent tutoring systems, and cognitive models.

The HCII spans three floors of Carnegie Mellon's Newell-Simon Hall and two buildings on nearby South Craig Street. In both locations, students and researchers can take advantage of the HCII's heterogeneous distributed computing environment, experimental computers and systems, wide variety of labs and workspaces, kitchen, and configurable social space. HCII's main facilities are the User Studies Laboratory, Design Facilities: Verge, the DevLab Physical Prototyping Laboratory, the Pittsburgh Science of Learning Center (PSLC), and various faculty labs. Examples of these faculty labs include the Social Computing Lab, Computational Experiences Lab, ArticuLab, and Game Design Lab.

The HCII has federally sponsored research revenues of \$8.7 million, the majority of which originates with the National Science Foundation. The HCII's research also includes \$1.6 million from foundations. Given that the HCII is the world leader in educational technology, its education researchers have had great success leveraging their research to obtain funding from partners like the: Bill & Melinda Gates Foundation, Alfred P. Sloan Foundation, Silicon Valley Community Foundation, and the James S. McDonnell Foundation, among others.

The HCII receives \$1.7 million from industry. The HCII's most active industrial partners are Apple (three faculty have five current agreements) and Accenture. It is expected that industry funding will increase in the coming years. Most other industry partnerships are generated through the Master of Human-Computer Interaction (MHCI) Capstone program. This program is one of the oldest and most robust masters level programs that offers a capstone and a key entry-point for industrial partnerships at CMU.

Education

The HCII attracts brilliant, enthusiastic, and determined students from around the world, who utilize the many tools of computer science to provide solutions for society. In Fall 2020, the HCII introduced the first Bachelor of Science in Human-Computer Interaction, which will produce HCI specialists who are technically skilled and adept at designing and prototyping interactive solutions with the latest digital technologies. Additionally, there are options for a major and minor in interdisciplinary HCI and an HCI concentration that provides core courses in human behavior, design, implementation, and evaluation, which culminates in a group-based senior capstone project for a client.

The HCII shares its human-centered approach to computer science with five interdisciplinary master's degree programs: Master of Human-Computer Interaction (MHCI); Accelerated Master of Human-Computer Interaction (AMHCI); Master of Educational Technology and Applied Learning Science (METALS); Master of Computational Data Science (MCDS), which is housed in the Language Technologies Institute; and Master of Science in Product Management (MSPM), which is a collaboration with the Tepper School of Business.

The MHCI program is the longest-running and most impactful Master of Human-Computer Interaction in the world. It offers a professional degree that includes user-centered research, iterative designs, and product development experience through the MHCI Capstone program, which is a generative launching point for HCII partnerships with industry.

A small, select group of students are admitted into CMU's PhD program in Human-Computer Interaction each year, which is rigorous, creative, and deeply interdisciplinary. Partnering and learning from both the founders in the field of HCI and the newest generation of top scholars, doctoral students have become the face of HCI throughout the world, inventing the solutions, tools, and methods to push back the boundaries of the problems HCI addresses. HCII graduates become faculty in the top ranked academic departments and leaders in the major research laboratories.

The Role

The HCII is in an excellent position. Its global standing, research impact, educational excellence, industry ties, and outstanding faculty and students are all assets that the new director will leverage to further advance its stature and impact. Over the last few years, the Institute has pushed to increase the size and diversity of its student body in response to the overwhelming demand for its graduates. The next HCII director will be a strategic leader and well-established scholar who will lead the operations of the institute, facilitate internal and external partnerships, and provide mentorship to the institute's members.

The Director will have a proactive vision for the educational mission to meet the tremendous demand for HCI courses on campus. There is a need to create innovative new courses while managing the existing courses and keep them up to date. The successful candidate will embrace organized delegation and support of the HCII's academic programs as well as provide leadership through an ever-evolving educational landscape.

The successful candidate will be a skilled communicator and strong advocate who can collegially compete and negotiate for resources and space. They must also be open to novel organizational ideas that leverage the HCII's strengths and provide an environment and culture that is conducive

to bringing a diverse but cohesive group of like-minded people together to ideate and implement creative initiatives. Experience with industry and fundraising is essential, as is the ability to be an ambassador for the missions of the HCII out in the world.

The Director of the Human-Computer Interaction Institute will report to the Dean of the School of Computer Science and be a key member of the dean's leadership team. They will collaborate closely with other department chairs/institute directors and faculty across the school and the university as well as seek partnerships with units outside the university. Reporting to the Director are the HCII faculty, educational program coordinators, a business manager, a human resources manager, a research administrator, an engagement manager, a marketing and communication specialist, and other administrative support staff. The Director is responsible for an approximately \$14 million operating budget.

Opportunities and Challenges

The chief opportunity for the Director of the HCII is to lead and shape the institute's activities and culture in ways that have a lasting impact for the field of Human-Computer Interaction, the School of Computer Science, and Carnegie Mellon University. The Director must be flexible and entrepreneurial, able to work in an environment that is dynamic and rapidly changing, and adept at cultivating relationships and enlisting support.

Solidify leadership of the discipline

The HCII holds the distinction as the world leader in research and education in Human-Computer Interaction (HCI). To that end, it attracts the best and strongest students and faculty who have deep foundational domain knowledge, excellent technical skills, and hail from wide ranging disciplines. The interdisciplinary nature of HCI welcomes creative, innovative, and diverse thought. The next leader of the HCII will need to be visionary and strategic about specifically defining Human-Computer Interaction as a vital discipline in the world of computer science by formalizing and advancing the cross-disciplinary work of the HCII, establishing a firm footing for the undergraduate and graduate programs, and advocating for the continued support of HCII research and engagement within the computing research field. This will enable the HCII to continue to attract the best and the brightest minds in computer science.

Establish and facilitate productive relationships across CMU

The success of the HCII is dependent on its multidisciplinary and cross-collaborative nature, which leads to fruitful connections and joint appointments across the SCS and other schools at CMU like the Dietrich College of Humanities and Social Sciences, the School of Design, the School of Art, the College of Engineering, and Heinz College. Some examples of this are initiatives like ENAiBLE, IDeATe, the Simon Initiative, and research in the areas of Learning Science and Technologies, Human Assistance, and Computer Aided Manufacturing, to name a few. HCII scholars are sought out by collaborators across academia and industry. One example of a conduit for research expansion is the MHCI Capstone, which may lead to broader opportunities for partnerships within HCII. The extensive network of SCS alumni in academics and industry is also an avenue for fostering and fortifying partnerships and engagement external to CMU. Working with the SCS Partnerships Team, the next HCII director must be adept at facilitating and nurturing the organic relationships that permit the discipline to thrive.

Ensure sustainable growth of the HCII

With an ever-larger cohort of doctoral students, the hiring of new faculty, and the increase in demand for HCI classes across campus, the HCII has experienced impressive growth in recent years. This puts a premium on space, strains administrative support, necessitates management of educational programs, and requires more resources. Attention should be paid toward efficiency of support for education and research programs, building online education pathways, creating a strong curriculum for the undergraduate major as well as the master's programs, and cultivating closer relationships with HCII's alumni base to potentially yield dividends for both fundraising dollars and industrial partnerships. Fundraising to provide endowments for faculty, scholarships for students, and space for the current and future expansion would ensure the success of the HCII well into the future. The next HCII Director needs to set an agenda for new areas of strategic, customized, and sustainable growth.

Champion diversity, equity, and inclusion

The HCII attracts a diverse group of forward thinking, socially-aware junior faculty and students. Within the realm of the work that is also being done with diversity, equity, and inclusion at the SCS and University level, the next Director needs to be thoughtful about increasing and supporting diversity, promoting inclusion, and providing an environment that is conducive to creativity, growth, well-being and belonging for all faculty, students, and staff as members of the HCII community.

The HCII is uniquely positioned to address larger societal issues through education and research. Collaborative centers like the Center for Informed Democracy and Social Cybersecurity (IDeaS), HCII's research into Accessibility, and its tremendous strengths in Learning Sciences and Technologies, all address major challenges that affect populations nationwide and around the world. The Director will continue to champion HCII's essential and transformative work in these areas.

Foster mentorship and professional development in the HCII community

With the influx of junior faculty and new students comes the importance of directed advising, coaching, and mentorship to assist and encourage the development of the next generation of HCII contributors. Similar professional development support and incentivization needs to be provided to the technical and administrative staff. This is an opportunity for the next Director to be mindful of how service is incorporated into professional development and recognized in awards, incentivization, and promotion guidelines.

Qualifications and Characteristics

- PhD degree and record commensurate to the rank of full professor at CMU;
- A record of distinction and accomplishment in HCI or related field;
- A record of cross-disciplinary, collaborative vision for the future of HCI research;
- Excellent communication and collaboration skills;
- Knowledge and expertise commensurate with leading a premier institute that produces cutting edge research;
- Experience mentoring and supporting early career colleagues as well as students;
- Administrative experience and business acumen;

- A deep understanding of the interface of academia and industry;
- A demonstrated commitment to diversity, equity, and inclusion;
- Excellent interpersonal skills across all stakeholder groups;
- Approachable, responsive, reasonable, and open-minded.

Applications and Nominations

Review of applications, nominations, and expressions of interest will begin immediately and continue on a confidential basis until an appointment is made. All inquiries, nominations/referrals, and applications (including curriculum vitae and letters of interest responding to the position priorities outlined above) should be submitted via Isaacson, Miller's website to:

<http://www.imsearch.com/8106>

Andrew Lee, Managing Partner
Vijay Saraswat, Managing Associate
Jane McInerney, Senior Associate

Carnegie Mellon University considers applicants for employment without regard to, and does not discriminate on the basis of, gender, race, protected veteran status, disability, or any other legally protected status.