
Annual Report 2018–19
Acknowledgments

In 2004, Carnegie Mellon and Qatar Foundation began a partnership to deliver select programs that will contribute to the long-term development of Qatar. For 15 years, we have shared a mission: to provide a world class education to students in Qatar.

Carnegie Mellon University in Qatar thanks His Highness Sheikh Tamim Bin Hamad Al Thani, Amir of the State of Qatar, for his leadership and commitment to progress and education.

We also express our deep appreciation to His Highness the Father Amir Sheikh Hamad Bin Khalifa Al Thani, Her Highness Sheikha Moza bint Nasser, Chairperson of Qatar Foundation, and Her Excellency Sheikha Hind bint Hamad Al Thani, Vice Chairperson and CEO of Qatar Foundation, for their vision and leadership.
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### ADMISSION AND ENROLLMENT

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Carnegie Mellon University in Qatar
Carnegie Mellon Vision and Mission
Our Vision
Carnegie Mellon University will have a transformative impact on society through continual innovation in education, research, creativity, and entrepreneurship.

Our Mission
To create a transformative educational experience for students focused on deep disciplinary knowledge; problem solving; leadership, communication, and interpersonal skills; and personal health and well-being.

To cultivate a transformative university community committed to:

(a) attracting and retaining diverse, world-class talent;
(b) creating a collaborative environment open to the free exchange of ideas, where research, creativity, innovation, and entrepreneurship can flourish; and
(c) ensuring individuals can achieve their full potential.

To impact society in a transformative way—regionally, nationally, and globally—by engaging with partners outside the traditional borders of the university campus.
From the President
This year marks the 15th anniversary of Carnegie Mellon University’s partnership in Qatar, and we could not be more pleased with the results of our collaboration in Education City. Since 2004, this campus has been an extraordinary success story for the nation and region, as well as for Carnegie Mellon.

CMU-Q reflects this university’s commitment to apply a globally inclusive mindset to our role as educators, knowledge creators and engines of economic impact.

By empowering talented students with the tools they need in biological sciences, business administration, computational biology, computer science, information systems and more, we are preparing the next generation to be global leaders in a knowledge-based economy.

During our time in Doha, CMU-Q has graduated more than 800 young professionals who hail from 53 nations. Most of these alumni remain in Qatar to contribute to the nation’s long-term development, and we are proud that more than 60 percent of CMU-Q students are women.

Even though CMU-Q alumni are still early in their careers, they are already contributing significantly to the development of Qatar’s entrepreneurial sector and the international impact of the region’s scientific research. Our alumni are in banking, government, art and culture, consulting, the technology sector, and many other areas.

I would like to thank our partners at Qatar Foundation for their continued trust in, and partnership with, Carnegie Mellon. We are in Qatar today because of the vision and leadership of His Highness the Father Amir, Sheikh Hamad bin Khalifa Al Thani, Her Highness Sheikha Moza bint Nasser, and Her Excellency Sheikha Hind bint Hamad Al Thani. We look forward to continuing this relationship, which supports Qatar’s long-term development and growth.

I invite you to explore the events and accomplishments from the past year, outlined in this annual report, along with objectives for the continued growth of CMU-Q. I congratulate you on these accomplishments, and I look forward to seeing what the coming years will bring.

Farnam Jahanian
President
Henry L. Hillman President’s Chair
From the Dean
The 2018–19 academic year was notable for our campus: this was the 15th year that Carnegie Mellon delivered its unique approach to undergraduate learning in Qatar.

A 15-year anniversary is an opportunity to reflect on accomplishments and milestones. Since 2004, we have grown from 41 to roughly 400 students. To start, we provided just two academic programs: business administration and computer science. Over the years we have added programs in biological sciences, computational biology and information systems. Our faculty has grown more than three-fold, and we now occupy a beautiful building that hosts hundreds of events each year for students, members of the Education City community, and the general public.

The most important change is that each year, the number of our alumni grows. In 15 years, we have created an alumni network of more than 800 young professionals, most of whom remain in Doha to work, start families, and contribute to the growth and progress of Qatar.

As you read through the accomplishments of the 2018–19 academic year, I encourage you to see them through the prism of our 15-year anniversary. We are proud to have matured into a vibrant community of learners and thinkers, with strong connections to both CMU worldwide and our Education City counterparts.

Michael Trick
Dean
Harry B. and James H. Higgins Professor of Operations Research
Achievement and Impact

Since our first class graduated in 2008, more than 800 people have completed their undergraduate education at Carnegie Mellon University in Qatar. As they build their careers, we follow their successes, connect them to one another, and encourage them to mentor the next generation of CMU-Q students.
The graduation ceremony is an annual celebration of the hard work and achievements of our students. The Class of 2019 includes 78 young women and men who have completed five programs of study.

These years at CMU-Q are the foundation of your future. I, along with the rest of the CMU community, will be excitedly watching and waiting to see what you do next.

Michael Zamagias
Member of the Board of Trustees
Carnegie Mellon University
Keynote speaker
We've made it through with the values of creativity, integrity and dedication at the heart of our work, and our support systems of friends, faculty and family right by our sides.

Amer Ahmad
Student Speaker
Class of 2019

Andrew Carnegie Society Scholars
- Aisha Abdulrahman Darwish Fakhroo
- Moussa Zekak

Qatar Campus Scholars
- Aisha Abdulrahman Darwish Fakhroo
- Omar Khattab
- Haris Saad Syed
- Moussa Zekak

Outstanding Academic Achievement Awards
- Biological Sciences: Moussa Zekak
- Business Administration: Haris Saad Syed
- Computer Science: Omar Khattab
- Information Systems: Abdulaziz Abdulhameed Al-Haddad

Annual Report 2018–19
Our graduates are making their mark, both within Qatar and around the world. Alumni members are pursuing many different career paths, applying the skills they learned at Carnegie Mellon to lead, innovate, problem solve and serve their communities.

Alumni Impact

Our graduates are working at top international organizations.
A skill that we learn at CMU-Q is to be a reflective practitioner, to be solution-focused, not-problem-focused. It’s about having the ability to recognize your mistakes, think about your next step and move towards it.

Maria Ali
Class of 2018

12 graduating classes
847 alumni members

alumni live on
5 continents
53 nationalities

Select achievements

MetLife Innovation Award
Maryam Al-Naemi and Latifa Al-Thani, who graduated in 2018, and Maryam Al-Maadeed and Dana Al-Sheeb from the Class of 2019, represented Qatar at the Injaz AlArab competition in Kuwait, winning the MetLife Innovation Award for their platform for finding fitness classes across Qatar.

Education Excellence Awards
Roda Al-Hor, Maryam Al-Naemi and Latifa Khalid Al Thani received gold medals from His Highness the Amir Sheikh Tamim bin Hamad Al Thani at the 12th Education Excellence Day Award ceremony. The Education Excellence Awards are the most prestigious academic and scientific awards in Qatar.

ICT Exporter of the Year
Haris Aghadi and Abdulla AlKhenji’s company, Meddy, which began as a class project at CMU-Q, was named ICT Exporter of the Year at the fourth annual Qatar IT Business Awards. This is Meddy’s second recognition at the national awards: in 2016, Meddy won Tech Startup of the Year.
One year ago, the 90 new graduates completed their studies at CMU-Q and started their careers. In the year since they graduated, members of the Class of 2018 have made significant strides.

The Class of 2018 at Work

Contributing to Qatar

The majority of graduates from the Class of 2018 are working in Qatar and contributing to the knowledge-based economy. The top recruiter for this cohort was Qatar Airways, who hired six graduates. KPMG, Qatar Petroleum and the State Audit Bureau each hired four graduates.

Class of 2018 graduates work in a variety of sectors in Qatar, including government ministries, oil and gas, banking, health care, high tech and small and medium-sized enterprises.

Employment status one year after graduation

97% of the class was employed, in grad school, or not seeking employment as of May 2019

- Employed
- Graduate school
- Not in market
- Not employed
Driving innovation

CMU-Q graduates have exceptional quantitative skills and experience working in interdisciplinary teams. These young professionals are excellent candidates for technology firms that drive innovation.

Members of the Class of 2018 are now working at Cisco, Microsoft, Rheinmetall Barzan, Salesforce and Siemens, both in Doha and internationally.

Collaborating and problem solving

With a rigorous interview process, consulting can be a difficult industry for new graduates to enter. In her senior year at CMU-Q, Farha Khan founded the Carnegie Consulting Club to help develop her skills in business consulting and build a mentorship network at the university.

From the Class of 2018, a record number of six students, including Khan, were recruited by consulting firms. Khan remains involved with the club, which has expanded in the year since she graduated.

Furthering their studies

Eight members of the Class of 2018 decided to go straight into graduate studies. Three are now studying at Carnegie Mellon University’s School of Computer Science in Pittsburgh, rated one of the top computer science graduate programs in the world. Three are now at Hamad Bin Khalifa University, including one in the juris doctor program. One graduate is pursuing a master of science in computer science at Stanford, and one is studying applied computing at the University of Toronto.
Networking and Mentorship

For our students, graduation is just the beginning of a new relationship with CMU-Q. Our alumni remain closely connected to us, keeping us up-to-date with their personal milestones and career successes. Throughout the year, our alumni return to CMU-Q to network with one another, and mentor and guide a new generation of students.

CMU-Q keeps us part of the community by engaging our minds and providing us with a venue to develop those thoughts further.

Aisha Al-Darwish
Localization Advisor, Qatar Localization Resourcing
Qatar Shell
Class of 2010

Dinner with Twelve Tartans

A dozen alumni members came to share their workplace experiences with current students from each program at CMU-Q. The annual Dinner with Twelve Tartans is an opportunity for students to connect with and learn from CMU-Q graduates who are pursuing careers in Doha.

Alumni senior social

Each year, we bring together our alumni to reconnect with friends and faculty members, meet the new graduates, and network with one another. More than 100 alumni and graduating seniors gathered to celebrate the Class of 2019.
Career mentoring

Tartan Talks is an alumni panel interview series that delves into the challenges and opportunities after graduation. This year there were four panels featuring a total of 17 alumni who live and work in Qatar. Alumni also returned for career information sessions, workshops and the Careers Platform networking events.

Dublin alumni gathering

Carnegie Mellon alumni from the Qatar campus, the Pittsburgh main campus, and the Carnegie Mellon Portugal program gathered in Dublin, Ireland to network and meet with current CMU-Q students. With a booming tech sector, Dublin is becoming a destination for CMU graduates in a variety of fields.

Class reunions

This year, members of the first CMU-Q graduating class gathered for their 10-year reunion. The first class was comprised of 35 students, 16 of whom are Qatari. Since 2008, about half of the class has pursued graduate studies, and two-thirds now live and work in Qatar. We also reconnected with the Class of 2013 for their five-year reunion.

“I am a Qatari woman who has benefited so much from the CMU experience. I wonder if Andrew Carnegie ever thought he would have an impact on such a person, so far away from Pittsburgh.”

Eman Al-Emadi
Head of Web Development, Qatar Olympic Committee Class of 2008

The ethics of artificial intelligence

Alumni members, along with community partners and faculty and leadership from Carnegie Mellon’s Qatar and Pittsburgh campuses, gathered for a special lecture on the ethics of artificial intelligence. Carnegie Mellon University’s David Danks outlined how ethics should be integral to AI development in order to better understand the short- and long-term impact of technology.

Annual Report 2018-19
Admission and Enrollment

Our student community is at the heart of all we do at Carnegie Mellon University in Qatar. During the admission cycle each year, we seek out applicants who are motivated and eager to learn. Together, our students form a global-minded community that is enthusiastic, encouraging and supportive.
Events for Pre-College Students

Each year, we introduce nearly two thousand high school students to Carnegie Mellon University in Qatar. Pre-college workshops and events challenge the students and encourage them to explore career paths in business, science and technology. Many go on to enroll at CMU-Q.

Workshops for secondary students
- Alice Middle East Programming Competition
- Biotechnology Explorer Program
- Botball
- Experience CMU-Q
- Ibtikar Qatar
- Mindcraft
- Pi Day Mathematics Competition
- Summer College Preview Program
- Computer Science Institute

Summer College Preview Program
Secondary school students from across Qatar spent three weeks learning about the college experience during the Summer College Preview Program. SCPP 2018 was the largest in CMU-Q history, with 79 students participating.

I had a plan which shifted once I participated in SCPP. That’s how I joined CMU-Q and now I have a career I’m passionate about.

Ghaya Al Sulaiti
Business Analyst, Nakilat
Class of 2015
Pi Day 2019
A team from the American School of Doha took the top prize at CMU-Q’s fourth annual Pi Day Mathematics Competition. More than 400 students from 65 Qatar schools competed in the first round, with only four teams advancing to the finals. Fifty One East provided the prizes for Pi Day 2019.

Experience CMU-Q
Her Excellency Sheikha Hind bint Hamad Al Thani, Vice Chairperson and CEO of Qatar Foundation, visited CMU-Q for the launch of the Experience CMU-Q pre-college event in October. More than 150 students from 35 Qatar high schools spent the day on campus learning about the fields of business, science and technology. CMU-Q held a second workshop in January 2019.

15th edition of Botball
A team from Qatar Academy won the overall title at CMU-Q’s annual Botball competition for high school students. The competition, which was launched by CMU-Q in 2005, brought together 15 teams to program a robot through a complex game board.
The Admission Process

For each applicant to Carnegie Mellon, we look at more than grades: we consider the whole student. Our careful process results in an engaged community of learners who support and challenge one another.

CMU-Q’s interdisciplinary approach to education will offer you many opportunities to reach your full potential. Look around you to see how you can tackle challenges within a local and global context.

Dr. Amal Mohammed Al Malki
Founding Dean, College of Humanities and Social Sciences
Hamad Bin Khalifa University
Keynote speaker, Convocation, Class of 2022

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<td>702 applications</td>
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<td>96 students enrolled</td>
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<td>26 nations represented</td>
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Recruitment for the Class of 2023

Our primary geographic focus for recruitment is Qatar, and we participated in Education City visits to more than 40 schools in the country. We also took part in Discover Education City, a two-day collaborative event that hosted more than 1,000 people.

We also look beyond Qatar for qualified and interested applicants. As part of the Education City roadshow, our admission team travelled to Greece, Jordan, Kuwait, Lebanon, Morocco and Oman to meet with prospective students.

Marhaba Tartans

There were more than 80 newly admitted students and their parents at Marhaba Tartans 2019. The evening is an opportunity for incoming students to meet their professors and future classmates, and learn more about studying at CMU-Q.

Qatar Foundation grant program for new CMU-Q students

Qatar Foundation introduced a new need-based grant program for CMU-Q students entering the Class of 2023. Available to students of all nationalities, grants of up to 100% of the cost of attendance were offered based on financial circumstances. The grant program will provide outstanding support for this class, and help ensure a diverse, competitive and engaged student body.

Early Decision

CMU-Q welcomed the first 20 students of the Class of 2023 at a dinner to introduce the students and their parents to the community. This is the largest group of Early Decision students since CMU-Q introduced the process in 2017.

To be accepted to CMU, you demonstrated excellence and a strong sense of character, which you will certainly build on during your time at CMU.

Saleh Al-Raisi
Corporate Planning Analyst, Nakilat, Class of 2014
Keynote speaker, Early Decision Dinner
Our Student Community

The CMU-Q student community is vibrant and diverse, reflecting our continued commitment to the human development pillar of the Qatar National Vision 2030.

38 nations represented

Albania  
Australia  
Bangladesh  
Canada  
China  
Egypt  
France  
Georgia  
India  
Indonesia  
Iran  
Iraq  
Japan  
Jordan  
Kazakhstan  
Kenya  
Korea  
Kuwait  
Lebanon  
Moldova  
Nepal  
Oman  
Pakistan  
Palestine  
Philippines  
Qatar  
Romania  
Russia  
Saudi Arabia  
Serbia  
Sri Lanka  
St. Kitts and Nevis  
Sudan  
Syria  
Tanzania  
Tunisia  
United Kingdom  
USA
Financial aid

Financial aid options are a vital component of a diverse, competitive and strong CMU-Q student community. In 2018-19, six types of financial support were available for our students:

- Amiri scholarship, Ministry of Education and Higher Education
- Sponsorship from a national company
- Qatar Foundation financial aid
- Qatar Foundation scholarship
- Carnegie Mellon University in Qatar scholarship
- FAFSA loans for U.S. citizens

Companies who sponsored CMU-Q students

- Alfardan Group
- Amiri Diwan
- beIN Sports
- Chairperson’s Office
- Embassy of the State of Kuwait
- Embassy of the Republic of Serbia
- Ministry of Administrative Development, Labour and Social Affairs
- Ministry of Commerce and Industry
- Ministry of Defense
- Ministry of Education and Higher Education
- Ministry of Transport and Communications
- Ooredoo
- Qatar Airways
- Qatar Chemical Company
- Qatar Foundation
- Qatar National Bank
- Qatar Petroleum
- Sidra Medicine
- Siemens Qatar
Academics

In each of our five undergraduate programs, CMU-Q students develop a firm grounding in theory and quantitative skills. We then challenge them to apply their knowledge as they create, collaborate with one another, and work across disciplines.
Academics at CMU-Q

At Carnegie Mellon, we begin with a broad introduction to the liberal arts and sciences during the first semesters. Students then focus on major core classes in the middle semesters, and they deepen and broaden their scope in the last semesters through advanced electives.

Minors were offered in 15 different subject areas

- Arabic Studies
- Biological Sciences
- Business Administration
- Cognitive Neuroscience
- Computational Biology
- Computer Science
- Economics
- English Studies
- Global Systems and Management
- History
- Information Systems
- Mathematical Sciences
- Neuroscience
- Professional Writing
- Psychology

263 courses offered over 3 semesters

5 undergraduate programs

24 students spent a semester in Pittsburgh
The CMU-Q faculty

Our faculty members are experts in their fields and dedicated to undergraduate education. Faculty members provide individualized attention and focused instruction so that all students can reach their potential.

There are 7 students for every 1 faculty member

The courses you take at CMU-Q prepare you for work: it’s not just the quality of data that matters, it’s also the way you present and put things together.

Hussain Abdulla Hejji
Marketing and Economics Scheduling, Qatar Shell
Class of 2013

New faculty members

- **Andres Amerikaner**, visiting assistant professor, English
- **Lauren Burakowski**, assistant teaching professor, psychology
- **Ebru Genç**, visiting assistant professor, marketing
- **Pia Gomez Laich**, assistant teaching professor, English
- **Bonnie Youngs**, teaching professor, French and francophone studies

Meritorious Teaching Award 2019

**Serkan Akguç** received the Meritorious Teaching Award at the graduation ceremony for the Class of 2019.

Promotions

- **Khaled Harras**, teaching professor, computer science
- **Christos Kapoutsis**, associate teaching professor, computer science
- **Teresa MacGregor**, senior librarian
- **Benjamin Reilly**, teaching professor, history
Students develop a strong foundation in the natural sciences, while receiving rigorous training in the five core areas of biology: genetics, biochemistry, cell and developmental biology, neuroscience, and computational biology.

Class of 2019 scholars

Aisha Fakhroo and Moussa Zekak were chosen as the Andrew Carnegie Society Scholars for the Class of 2019. Fakhroo and Zekak are the first ACS Scholars from the Biological Sciences Program on the Qatar campus.

UN Young Champions of the Earth

Dina Altarawneh, who graduated in May 2019, was named one of five finalists for the UN Young Champions of the Earth competition for the West Asia region. She proposed a zero-waste grocery store that would be the first of its kind in the Middle East.

Frontiers of Oncology

Sophomore student Abdullah Shaar co-authored a Frontiers of Oncology article that investigates the role of a proto-oncoprotein in human malignancies. Shaar worked on the project during an internship at the National Center for Cancer Care and Research at Hamad Medical Corporation.

Carnegie Mellon University in Qatar
Breast cancer therapy research

A team led by Ihab Younis discovered a new avenue of research that could lead to more effective breast cancer treatment. Younis and alumnus Ettab El Marabti authored a paper in *Frontiers in Molecular Biosciences* titled: “The cancer spliceome: Reprogramming of alternative splicing in cancer.”

Wimmer Faculty Fellow

Mohamed Bouaouina was named a 2019-20 Wimmer Faculty Fellow at Carnegie Mellon’s Eberly Center for Teaching Excellence and Educational Innovation. Bouaouina will design and integrate an introductory sequence of online learning modules for the CMU-Q cell biology course.

New molecular biology lab

Gordon Rule established a new lab with a team of students investigating the molecular basis of how glutathione transferase inhibits a kinase. This work could lead to a new class of anti-cancer agents.

HBKU collaborations

Nesrine Affara delivered a seminar for the Life Science Seminar Series at Hamad Bin Khalifa University, sharing insights into the mechanisms that link humoral immunity, inflammation and cancer. Ihab Younis presented his work on deregulation of minor intron splicing as a critical contributor to breast cancer at the College of Health and Life Sciences Research Day.

I spent all of my time researching at CMU-Q, which is now reflected in the work I do. I am able to do this job because of the laboratory skills I developed at CMU-Q.

Saad Rasool
Research Specialist, Sidra Medicine
Class of 2018
Business Administration

Students learn to take a quantitative, analytical approach to business problem solving, while building a solid foundation in accounting, finance, economics, marketing, operations, management information systems and business communications.

Qatar Stock Exchange competition

A CMU-Q team took the top prize at Qatar Stock Exchange’s financial competition for university students. Maha Al-Kaabi, Fahad Salah Bahzad, Abraham Farooqui and Faisal Mir presented their three-pronged approach to increasing stock market liquidity to a panel of independent judges.

Qatar University business competition

At the Power of Analytics Business Case Competition hosted by Qatar University, a CMU-Q team placed second. First-year students Jawaria Abbas, Sara Hussein and Omaia Khandaker were in their first semester when they participated in the competition.
Health care initiative

Mustafa Akan’s work designing a more equitable distribution of donor livers is part of CMU’s new Tepper Health Care Initiative, which supports faculty members’ research advances in health care. Over the 2018-19 academic year, Akan was invited to present his research to the American Transplant Congress, the American Society of Transplant Surgeons, the INFORMS Healthcare Conference, and the Australian Society of Operations Research.

I innovation and entrepreneurship

George White delivered two invited talks at Doha’s Global Entrepreneurship Week on emotional intelligence in leadership. He also gave an invited talk at Qatar University on managing innovation. White is an organizer of the Al Fikra Qatar National Business Plan competition hosted by Qatar Development Bank.

Quick Startup 2019

CMU-Q students Ommar Aburaddad, Mohamed Hamdi, Faisal Mir and Haris Syed took first place at Quick Startup with an app to help drivers keep their eyes on the road. Quick Startup is CMU-Q’s entrepreneurship competition. Organized by faculty member George White, participants create a business plan during the weekend-long competition.

Hamad Medical Corporation collaboration

Cecile le Roux established an internship opportunity for students within the psychotherapeutic unit of HMC’s National Center for Cancer Care and Research. She also serves as an expert advisor for the steering committee on the HMC Workplace Stress and Well-being Policy Taskforce.

My major in Business Administration was one of the best decisions of my life. If you start from a good place and have a good foundation, you will move up.

Mohammed Hadi Takiddin
Head of Finance, Commercial Branch, Qatar Museums
Class of 2013

Sports analytics

John O’Brien and Fuad Farooqi developed a course in analyzing data from sports leagues. O’Brien and Farooqi are developing a hub of educational, research and outreach activity in the area of sports analytics, including a dashboard that analyzes statistics from the QNB Stars football league.
Computational Biology graduate

Youssef Kanbour became the second student to graduate from CMU-Q’s highly selective Computational Biology Program. Following the School of Computer Science curriculum, the interdisciplinary program includes core coursework in computer science, biology, computational biology, mathematics and science.
Oman programming competition

Computer science students Mohammed Yusuf Ansari, Mohammed Nurul Hoque and Akhyar Kamili won the Oman Collegiate Programming Competition at Sultan Qaboos University. A second CMU-Q team, including Sameer Ahmad, Ishaq Yusuf Haj Hasan and Hari Krishna, placed fifth in the competition. A total of 52 teams from 22 institutions participated.

Oman programming bootcamp

A team of computer science students placed second at the Hello Muscat ICPC Programming Bootcamp in Oman. Keivin Isufaj, Swapnendu Sanyal and Omar Sinan spent an intensive six days learning programming concepts and competing in daily contests.

Courses are very relevant in the workplace. Algorithms, for example—we implement them every day, technically following the same approach but on a bigger scale.

Zeinab Khalifa
Digital Channels Engineer, Vodafone
Class of 2016

Qatar hub for Google Hash Code competition

Teams of coders gathered at CMU-Q for the Google Hash Code competition, a contest that challenges the programming skills and creativity of students and professionals from around the world. CMU-Q hosted the only hub in Qatar.

International faculty collaborations

- Christos Kapoutsis was selected for the International Federation for Information Processing’s Working Group 1.2, “Descriptional Complexity.”
- Kemal Oflazer was invited to serve as associate editor of Computer Speech and Language (Elsevier).
- Giselle Reis was elected to the steering committee for “Logical Frameworks and Meta Languages: Theory and Practice Workshops.” She also served as program chair for the 2018 Logical Frameworks and Meta Languages: Theory and Practice (LFMTP).
Information Systems

Students learn to analyze how things connect and work together, identify problems and challenges, and use technology to design and implement solutions that improve productivity and efficiency.

International Invention Fair Middle East

Mohammed Larri, a first-year student in information systems, won a gold medal at the 11th International Invention Fair Middle East (IIFME) in Kuwait. Larri invented an offside detector for football matches that detects the position of the players, and sends an automatic notification to the referee when a player is offside.

Power of Analytics Business Case Competition

A student team placed third at the Power of Analytics Business Case Competition hosted by Qatar University. Yasmin Abdelaal, Zainab Akhtar and Aya El-Sakka were juniors in the Information Systems Program.
The most valuable thing I learned in my degree is that solving information systems problems involves real people, not just technology.

Ibrahim Soltan
Technical Specialist, Microsoft
Class of 2017

Information Security

Nui Vatanasakdakul spoke on digital transformation and risk in the financial sector at the 5th Annual Information Security Conference for the Financial Sector organized by Qatar Central Bank. She also spoke at the launch ceremony of Mohammed Al-Dorani’s book, Cyber War: Qatar Blockade – GCC Countries on cybersecurity strategies.

Nursing informatics initiative

Dan Phelps delivered workshops on nursing informatics at several hospitals in the Hamad Medical Corporation network. The workshops are part of a new initiative by Hamad to empower nurses and encourage research in the area of health informatics. More than 500 nurses attended the sessions.

Alan Male’s A Companion to Illustration

Susan Hagan was invited to contribute a chapter to Alan Male’s, A Companion to Illustration: Art and Theory, a benchmark reference volume that explores the definition of illustration and its impact on culture. Hagan’s chapter discusses illustrators as collaborative problem solvers.

Climate change and sustainability

Chadi Aoun presented a workshop on climate change and sustainability at the Qatar Investment Authority, as well as a lecture on green information systems at the THIMUN Qatar Leadership Conference. In 2019, he was invited to serve on the SustainableQatar advisory board.
Arts and Sciences

All students learn to draw connections and work effectively outside their major through study in the arts and sciences, including required courses such as chemistry, English, math and physics, and electives in a wide variety of disciplines.

Qatar University Math Championship

CMU-Q students took the three top spots in the men’s division of the Qatar University Math Championship: the first-place winner was Keivin Isufaj, Muhammad Nahin Khan took second and Swapnendu Sanyal was third. Leiyue Chen took fifth place in the women’s division.

Brain Awareness Week workshop

Students in Jennifer Bruder’s cognitive neuropsychology class created and taught a workshop to two classes of elementary school children. The workshop, which was inspired by International Brain Awareness Week, included interactive activities for the children to learn about how the brain works.

Liberal Arts International Conference

Several CMU-Q faculty members, including keynote speaker Dudley Reynolds, presented research at the seventh annual Liberal Arts International Conference. Hosted by Texas A&M University at Qatar, the conference aimed to shed light on the liberal arts in an ever-changing and dynamic global era.

Carnegie Mellon University in Qatar
Spanish language trip to Spain

Erik Helin led a study trip to Spain for students to enhance their Spanish language skills. Ten students took classes at an institution in Seville and explored the area to practice the language and learn more about culture and history.

Meeting of the Minds classroom showcase

At the Meeting of the Minds symposium, students in two Arts and Sciences electives showcased their work. Students in Bonnie Youngs’ course displayed essays and posters on the topic of understanding cultural complexities. Students in Ramesh Krishnamurti’s architecture class showcased their work employing machine learning to resolve typology.

Exploring Math lecture series

The second season of the lecture series, Exploring Math, included talks from series organizer Niraj Khare, as well as Mohamed Zayed and Qatar University’s Abdelouahed Hamdi. The series delves into the beauty, impact and development of classical mathematical concepts.

Qatar Faculty Forum

Benjamin Reilly shared his research at the Qatar Faculty Forum, Qatar Foundation’s regular academic seminar series for the liberal arts and sciences. Reilly discussed how the risk of malaria affected travel to Rome in the years 1400 to 1850.

English Language Centre symposium

Dudley Reynolds was the keynote speaker at the Community College of Qatar’s English Language Centre (ELC) symposium. The symposium began with Reynolds’ plenary session on building a coherent system for English language education.
Interdisciplinary Collaboration

Students at CMU-Q are encouraged to reach beyond traditional program boundaries to solve problems. Interdisciplinary study encourages creativity, innovative problem solving and teamwork.

IGEM competition

A team of students from four programs developed a rapid, inexpensive test using CRISPR technology to screen for carriers of sickle cell anemia. They presented their project at the International Genetically Engineered Machine (IGEM) competition in Cambridge, Massachusetts. Al Khalij Commercial Bank (al khaliji) generously supported the IGEM 2018 team.

Technology and culture

Faculty members from computer science and business administration led an educational trip to Tokyo to explore how Japanese people have interwoven business, technology, and traditional culture.

Experiences in sustainable living

Faculty members from both information systems and biological sciences led a multidisciplinary trip to explore the innovative ways that Greece is approaching sustainability.

Coca-Cola business case

A student team worked with executives at Coca-Cola to create a marketing strategy. The students were part of the CMU-Q Consulting Club, where students from all disciplines can partner with real companies to learn how to solve complex business problems.

It was a pleasure for us to work with this interdisciplinary student team and see their fresh ideas and enthusiasm for learning.

KV Rajan
Director of Human Resources
Coca-Cola Almana
Academic Support
CMU-Q supports students throughout their undergraduate studies with resources that help them succeed and thrive.

Freshman Edge 2018
Twenty newly enrolled students participated in the three-week Freshman Edge Summer Program in 2018. The project-based program provides new students with a head start on the college experience.

Student College (StuCo) Program
The StuCo program included eight mini courses designed and taught by students. The program is adapted from a similar initiative on CMU’s main campus.

Outstanding Course Assistant
The ARC recognized the contributions of students who provide tutoring support at the first Outstanding Courses Assistant event. Fifteen students were nominated, and Laila El-Beheiry, a computer science major, won the award.

Qatar National Library’s Christopher Alario
Christopher Alario traced the history of the Qatar peninsula on maps at a lecture for the CMU-Q community. Alario is the information services librarian for historical maps at Qatar National Library.

CMU Libraries collaboration
CMU business and economics librarian Ryan Splenda visited the Qatar campus, delivering workshops for students in the supply chain management and organizational behavior classes.

Research into e-textbooks
At information literacy conferences in Europe and North America, Teresa MacGregor and Alicia Salaz presented their research into textbook format preference. The study looks at how libraries can maximize the learning value of e-textbooks by training students to use digital platform features more effectively.

Academic Resource Center
The ARC supports students as they develop the skills, strategies and behaviors to be confident, independent and active learners.

Library
The library is a resource for both studying and research, housing a large collection of print volumes, databases, ejournals and ebooks, and coordinating textbooks for all courses at CMU-Q.

3,700 textbooks distributed
96 students worked as Undergraduate Course Assistants
4,315 consultations at the ARC

Annual Report 2018-19
Community Engagement

We have strong, living connections to the global Carnegie Mellon community, Qatar Foundation and its entities, and our strategic partners in government and industry. These partnerships offer rich learning opportunities for our students as we help build Qatar’s knowledge economy.
We strongly believe that universities should be a knowledge hub for the community, initiating the discussions that move society forward.

Thought Leadership

Pharmaceuticals in Qatar
Moderated by Ihab Younis, the panel included Ahmed Al Mohanadi, CEO of QLife Pharma, Omar El-Agnaf, acting executive director of Qatar Biomedical Research Institute, Emad Mansour, supervisor drug registration, Ministry of Public Health, and Salvino Salvaggio, senior director of implementation and VP RDI Office Management.

E-commerce in Qatar
The panel was moderated by Nui Vatanasakdakul and included Faleh Al Naemi, chairperson and managing director of Qatar Post, Amna Jassim Sultan, isteshara manager of Qatar Development Bank, and Amina Ahmadi, co-founder of Oola Sports.
The Dean’s Lecture Series

For the Dean’s Lecture Series, we host prominent industry leaders and government officials to share their expertise with the Qatar community.

“The Dean’s Lecture Series is an opportunity to speak directly to the students about issues that are crucial to Qatar.”

H.E. Dr. Ibrahim Ibrahim
Economic Advisor, Amiri Diwan

His Excellency Sheikh Abdulla Bin Saoud Al Thani
Governor, Qatar Central Bank
Economic realities facing the MENA region and challenges facing Islamic fintech

Raj Reddy, University Professor of Computer Science and Robotics, Moza Bint Nasser Chair of Computer Science and Robotics, Carnegie Mellon University
AI: Background, history and future opportunities

Neil Walsh, Head of Cybercrime, Anti-Money Laundering and Counter-Financing of Terrorism Department, United Nations
Cybercrime: Challenges and methods of prevention

Adrian Wood, Chief Executive Officer, Siemens Qatar
The role of Siemens in supporting economic prosperity in Qatar

Andrew Faulkner, Managing Director and Chairman, Qatar Shell
International energy companies and their role in human development and sustainable growth

His Excellency Dr. Ibrahim Ibrahim
Economic Advisor, Amiri Diwan
The development of Qatar’s natural gas strategy: Challenges and responses

Dean’s Lectures since 2011

53
Our Strategic Partners

We are proud to have strong, collaborative relationships within Qatar’s government and industry sectors. Each year, we strive to strengthen the connections with our strategic partners, and reach out to form new partnerships.

Executive education courses

We were pleased to welcome our strategic partners to campus for executive education courses taught by members of the CMU-Q faculty. This year, we offered courses in:

- Women's career development and negotiation
- Social engineering prevention
- Introduction to business negotiation
- Mastering innovation and corporate entrepreneurship
- Innovative-driven entrepreneurship
- Cyber resilience in the digital transformation age
- Advanced negotiation: Resolving conflict in the workplace

7 executive education courses
298 executive education participants
9 new memoranda of understanding
Memoranda of Understanding

Dean Michael Trick signed nine memoranda of understanding during the academic year, formalizing partnerships that will promote collaboration in science and research, and provide opportunities to students and graduates of CMU-Q.

Ashraf Abu Issa  
Chairman and CEO  
Abu Issa Holding

Mohammed Khalifa Al-Suwaidi  
CEO, Aspire Zone Foundation  
Director General, Aspetar

Nasser Al Naimi  
Managing Director  
Barzan Holdings

Bader Abdullah Al-Darwish  
Chairman and Managing Director  
Fifty One East

Abdulla Al Rwaili  
Executive Director and Managing Director  
Gulf Bridge International

Ahmed Ibrahim Al-Darwish  
Chief Administration Officer  
Q-Chem

Ashraf Abu Issa  
Chairman and CEO  
Abu Issa Holding

Hassan Ibrahim Hassan Al Asmakh  
Vice President and CEO  
Regency Group Holding

Robert Crone  
Acting CEO  
Sidra Medicine

Annual Report 2018–19
The Impact of Education

As an educational institution, we are in a unique position to influence and help develop the ways that people learn in Qatar. Through targeted programs, CMU-Q is enhancing learning opportunities in key areas.

Young Writers Open Mic Night

In partnership with the U.S. Embassy in Qatar, we celebrated local talent at the third Young Writers Open Mic Night at the Education City Student Center. Participants enjoyed an evening of comedy, poetry, music and spoken word performance by students and members of the wider community.

New internet protocol

CMU-Q worked closely with Qatar’s Communications Regulatory Authority and Qatar University to create guidelines for Qatar organizations to transition to Internet Protocol, version 6 (IPv6). The transition will ensure that Qatar’s learning institutions, government entities and businesses are prepared as the demand for internet connectivity increases.

INJAZ Qatar certificate of appreciation

INJAZ Qatar awarded CMU-Q a certificate of appreciation for our dedication and outstanding contributions. INJAZ Qatar offers programs for youth that encourage entrepreneurship and creativity.
At this year’s Alice Middle East Programming Competition, a team from Al Arqam Academy took first place. There were 111 students from 12 schools who participated in the fourth annual showcase of creativity and programming skills.

The original Alice software was developed at CMU and adapted for Qatar with a grant from Qatar National Research Fund. In partnership with the Ministry of Education and Higher Education, Alice Middle East is now part of the curriculum at all Qatar government schools that teach information communication technology.

The Alice Middle East Programming Competition was also supported by Abu Issa Holding.

Mindcraft

Mindcraft is a workshop program for high school students that introduces the basic principles of computer science. Over the last three years, nearly 3,000 high school students have attended Mindcraft workshops at CMU-Q. The workshops introduce students to computational thinking, challenging them to program a robot through a maze.

This year, CMU-Q adapted Mindcraft for children in elementary school. CMU-Q introduced this new program—called Mindcraft Junior—at National Science Research Week.

Hassim Bin Jassim Center for K-12 Computer Science Education

Since joining forces in 2017, CMU-Q and the Jassim and Hamad Bin Jassim Charitable Foundation share a common goal: to foster students’ computing skills and raise awareness of the importance of computer science to progress and development. This past year, the Hamad bin Jassim Center for K-12 Computer Science Education continued to expand and reach more students.

The center’s goal is essential for the future of Qatar.

Saeed Mathkar Al-Hajri, Board Member and CEO Jassim and Hamad Bin Jassim Charitable Foundation
We are proud to be part of the Carnegie Mellon global community, connected to the scholarship, research, spirit and culture that defines Carnegie Mellon worldwide.

CMU leadership visit
CMU president, Farnam Jahanian, and members of CMU leadership and the Board of Trustees, visited Qatar to learn about the campus. While in Doha, the group toured CMU-Q and Education City and met with Her Excellency Sheikha Hind bint Hamad Al Thani, vice chairperson and CEO of Qatar Foundation, as well as CMU-Q alumni and students.

Entrepreneurs in Dialogue
To introduce the new Entrepreneurs in Dialogue series, CMU-Q hosted Elijah Mayfield to discuss the challenges of bringing early-stage technology innovations to market. Mayfield, who is now an entrepreneur-in-residence at CMU’s School of Computer Science, created the startup LightSide Labs, which used technology to help school-aged children improve their writing skills.
Bill Brown Distinguished Lecture in Biological Sciences
The inaugural Bill Brown lecture featured Ann Gibbons, a science writer who is the author of The First Human: The Race to Discover Our Earliest Ancestors.

Distinguished Lectures in Biological Sciences are named in honor of Bill Brown, an honored professor of biological sciences at CMU who passed away in 2007.

Project Rwanda
Students from three of Carnegie Mellon University’s global campuses met with the president of the Republic of Rwanda, Paul Kagame, to discuss their passion for education and technology. The students were participating in Project Rwanda, an initiative that is organized by CMU students from the Qatar, U.S. and Rwanda campuses.

John Patrick Crecine Distinguished Lecture in Arts and Sciences
Agnieszka Wykowska, who leads the Italian Institute of Technology’s Social Cognition in Human-Robot Interaction unit, spoke to CMU-Q about research into how humans perceive and interact with robots.

Distinguished Lectures in Arts and Sciences are named in honor of John Patrick Crecine, dean of CMU’s College of Humanities and Social Sciences from 1976 to 1983.

IMPAQT 2019
Ten students from each of the Qatar and Pittsburgh campuses participated in this year’s IMPAQT program. IMPAQT, which stands for Initiating Meaningful Pittsburgh and Qatar Ties, is an annual student exchange that takes place during spring break.
Collaborations with Qatar Foundation

We are an integral part of the Education City community, with our students, staff and faculty members working with the partner universities to enhance the student experience.

Convocation 2019

His Highness the Amir Sheikh Tamim Bin Hamad Al Thani and Her Highness Sheikha Moza bint Nasser attended Qatar Foundation's annual convocation ceremony that honored 786 graduates, including the 78 members of CMU-Q’s Class of 2019.

Cross registration

CMU-Q
Fall: 25 students
Spring: 5 students

Education City universities
Fall: 42 students
Spring: 28 students

3 Academic Bridge Program students enrolled at CMU-Q
12 HBKU Computer Engineering students enrolled at CMU-Q
Her Excellency at Experience CMU-Q

In the presence of Her Excellency Sheikha Hind bint Hamad Al Thani, CMU-Q held the inaugural Experience CMU-Q pre-college workshop. The event was also attended by Joint Advisory Board members Her Excellency Dr. Hessa Sultan Al Jaber, and His Excellency Sultan bin Rashid Al Khater.

Darb Al Saai

CMU-Q showcased our Alice Middle East software at Darb Al Saai as part of the 2018 Qatar National Day festivities. CMU-Q is part of Qatar Foundation’s tent, which celebrated the theme, ‘together for our homeland’ to promote Qatari culture.

Farnam Jahanian on tech disruption

CMU’s president, Farnam Jahanian, delivered a lecture on the future of higher education in the age of technological disruption. Jahanian was a distinguished speaker for Qatar Computing Research Institute. He is a member of QCRI’s Scientific Advisory Committee.

Edication City Career Fair

Approximately 1,500 students and recent graduates from across Qatar Foundation visited the 2019 edition of the Education City Career Fair. The annual event is a collaboration between Qatar Foundation and the partner universities, including CMU-Q.

WISE roundtable on language learning policy

Dudley Reynolds led a roundtable discussion on the topic of language learning and multilingualism. The discussion was part of the WISE Happening series, a monthly forum hosted by the World Innovation Summit for Education (WISE).

Health Advisory Board

The Education City partner universities together contribute to a Health Advisory Board that meets each month at CMU-Q to collaborate on promoting and encouraging health and wellness throughout Education City. This year’s events included the Education City Health and Wellness Fair and the Breast Cancer Awareness Walk in Oxygen Park.

Education City Speaker Series at CMU-Q

Dame Natalie Massenet, a fashion entrepreneur and former journalist, spoke as part of Qatar Foundation’s Education City Speaker Series. The talk was held at CMU-Q and drew a large crowd from Education City and the wider Qatar community.
Student Experience

Our students go through a transformation over the four years of their undergraduate education. We encourage them to come together as a community of learners, explore their interests, and learn new skills.
A Strong, Connected Community

Our campus is a unique place to study: the students, alumni, faculty and staff form a close-knit, diverse community that is enthusiastic, supportive and energizing.

New student orientation

Each year, student leaders organize the freshman class orientation week. This is a time for new students to learn about the resources, expectations and opportunities at CMU-Q, to meet their professors, and to bond with one another. This year’s incoming students formed the Class of 2022.
Game and trivia nights
Students, faculty and staff connected throughout the year at events like the Brain Bowl trivia challenge and Family Feud, a game night in the style of the classic television show.

Tartans Got Talent
Students and alumni sang, danced and entertained at the annual student-organized talent show.

Qatar Creates
The student-led Photography Club published Qatar Creates, the second annual anthology of student artwork, photography and creative writing.

Qatar National Day Celebration
Students, faculty and staff gather each year to celebrate the culture and heritage of Qatar at an evening hosted by the Qatari Student Association. This year’s event included traditional food, dances and handicrafts.

Ma3salama Tartans
As the senior class approached graduation, students from all years came together to bid farewell and offer their congratulations and best wishes.

International Day
With students hailing from 38 nations and five continents, International Day is a celebration of diversity for the entire CMU-Q community. This year’s event featured international cuisine, cultural activities, and musical and dance performances.
Education City Community

We are proud to be active, enthusiastic members of the Education City community, and our students form an integral part of the multiversity experience.

Tarnival

Organized by student government, the annual Tartan carnival is an evening of food, games, entertainment and fun. Members from the entire Education City community dropped by Tarnival 2018 on the green spine to help us celebrate.

Backyard Battle of the Bands

Students from universities across Education City joined in an evening of fun and music at this year’s Backyard Battle of the Bands. CMU-Q hosted this year’s event in our building.
Arab Innovation Academy 2019

Two of the top teams at the Qatar Science and Technology Park Arab Innovation Academy included students from CMU-Q. During the two-week academy, Jawaria Abbas, Roudha Al Emadi and Sara Hussein worked in teams to build a plan for a start-up.

Qatar Foundation sports awards

CMU-Q won both the league and cup championships for this year’s Education City men’s football. Abdurrehman Syed was named best goalkeeper and Mohammed Larri, Hussain Feroun, Taimur Rizwan and Moussa Zekak were selected as men’s football all-stars. Zelealem Yilma received the award for best coach.

CMU-Q was also the most recognized university at this year’s Qatar Foundation sports banquet. For futsal, Almayasa Al-Naimi was named women’s all-star, while Lauren Burakowski received awards for sportsmanship and best coach. Ahmed Zahid and Abdurrehman Syed placed first and third, respectively, in badminton. Taimur Rizwan placed first in table tennis and second in billiards.

CMU-Q Hackathon

Hackathon 2019 delivered a weekend of high-tech creativity and innovation, with 11 teams participating from CMU-Q, CMU Pittsburgh, Northumbria University in Qatar, Northwestern University in Qatar, Qatar University and Weill Cornell Medicine–Qatar. The top prize went to CMU-Q students Sideeg Hassan, Ammar Karkour, Abdullah Shaar and Shaden Shaar. Hackathon 2019 was supported by Siemens Qatar.
Our students continue to learn outside the classroom, with a bevy of opportunities to develop the skills of leadership, community service and teamwork.

Leadership, Service and Personal Development

Career networking

CMU-Q welcomed 37 employers to Careers Platform 2019, and 19 employers to Careers Platform: Technology Edition. Professional Services Day was a separate session, open to students throughout Education City, that featured consulting firms. The events are part of a slate of CMU-Q programming to help students develop the skills of networking, resume writing and interviewing.
CMBA Business Fashion Show

The student-led Carnegie Mellon Business Association organized a business attire fashion show to educate students about professional dress and presentation.

Dublin business and technology

A group of CMU-Q students travelled to Dublin, Ireland, to explore the city's rapidly growing business and technology sector. The students toured several organizations to learn how different industries operate in Europe's fastest growing economy.

Leadership travel

CMU-Q organizes travel throughout the year to help students develop leadership skills and an awareness of the needs of different global communities. This year, trips included Greece, Georgia, Morocco, New Zealand, Rwanda, Switzerland and Thailand.

Language Bridges

Language Bridges is a student-led organization where CMU-Q students teach English to Qatar Foundation service workers, many of whom work in janitorial, landscaping and facility maintenance.

Internship Showcase

Four students presented their summer work experiences to an audience of students, faculty members and potential employers at Internship Showcase 2018. The showcase provides both inspiration for students to pursue internships, and a venue to network with potential employers.

Senior Leadership Awards 2019

Each year, CMU-Q acknowledges graduating seniors who have excelled in the areas of leadership, service and community building.

- Ommar Laith Aburaddad
- Amer Javed Ahmad
- Maha Erhama Al-Kaabi, with distinction
- Dina Nayel Al-Tarawneh
- Najlaa Al-Thani
- Cyrine Darwish
- Reem Abdelati Elasad, with distinction
- Eman Fatima, with distinction
- Muhammad Ibrahim Ghous, with distinction
- Faisal Rizwan Mir
- Hasan Naveed
- Pancé Nwaisar
- Haris Saad Syed
- Moussa Zekak

Annual Report 2018–19
Research

At its heart, research at Carnegie Mellon looks for practical answers to complex, real world problems. In this spirit, we at the Qatar campus encourage our faculty members and students to explore their fields and engage in projects that will have an impact.
The Year in Research

Research is at the core of Carnegie Mellon and touches nearly every corner of the university. Faculty members at the Qatar campus, as well as CMU-Q alumni in Qatar and around the world, are actively engaged in projects that have local, regional and international significance.

Faculty research

15 ongoing NPRP research projects

18 book chapters

Turkish Natural Language Processing

Kemal Oflazer, along with co-editor Murat Saraçlar of Boğaziçi University in Istanbul, spent more than four years bringing together 25 years of work in the area of Turkish Natural Language Processing. The book was published in 2018 in both hard-copy and online versions, and more than 2,000 copies of various chapters have been downloaded.

Digital, 3D model to help in prenatal care

CMU-Q’s Hasan Demirkoparan and Heiko Topol have created a new mathematical model to predict how human tissue responds to the physical stresses of pregnancy. The digital 3D model could lead to a new tool for doctors to measure the risk of miscarriage or pre-term delivery.
New avenue of investigation for cancer therapy

CMU-Q researchers have discovered a new area of inquiry that could lead to more effective breast cancer treatment. Ihab Younis and Ettaib El Marabti, a 2017 graduate, have investigated how the cellular mechanism splicing is different in cancer cells. Targeting these cells could be one way to kill cancer cells while leaving healthy tissue intact.

ISSCR Abstract Merit Award

CMU-Q alumna Bushra Memon, who is now pursuing her PhD at the College of Health and Life Sciences at Hamad Bin Khalifa University, was recognized by the International Society for Stem Cell Research for her outstanding research on diabetes during the 2019 ISSCR Conference in Los Angeles.

Voice technology at the World Economic Forum

CMU-Q alumnus Mahmoud Al Ismail, now a research associate at the School of Computer Science, was part of a CMU delegation to the World Economic Forum’s Annual Meeting of New Champions, in Tianjin, China. Al Ismail is part of a team at the Language Technologies Institute that is researching voice technology.

New projects

- **Incoming subaward with Qatar University**
  The Garbled Computer: Towards computing without seeing
  Co-LPI: Ryan Riley, CMU-Q
  Co-LPI: Qutaibah Malluhi, Qatar University

- **Incoming subaward with Hamad Bin Khalifa University**
  Circumventing of microbial bioinvasion controls by ballast water
  PI: Annette Vincent
  LPI: Basem Shomar, Qatar Environment and Energy Research Institute (QEERI), HBKU

- **New seed grant in arts and sciences**
  Pilot corpus of undergraduate information systems writing in Qatar
  Maria Pia Gomez Laich

- **New seed grant in biological sciences**
  Molecular mechanism of Jun Kinase (JNK) inhibition by GSTP1: Phase I - reagent development
  Gordon Rule

Alumni diabetes research at CUDOS 2018

CMU-Q alumni showcased their work at the conference series on understanding molecular mechanisms in cardiovascular biology, diabetes, obesity and stroke, organized by Sidra Medicine. Alya Al-Kurbi, Asma Al-Naama, Omair Al Nuaimi, Reem Hasnah and Mohammed Janahi each presented work in the area of Type 1 diabetes.
Research Office Seminar Series

The Research Office launched a new seminar series for the CMU-Q community, inviting students, faculty and staff to learn more about the ongoing projects at the university.

Modeling collagenous soft tissue

Mathematical models that describe how soft biological tissue responds to mechanical stress are an essential part of basic biomechanics. This project creates continuum level mathematical formulations that describe the relation between swelling, deformation, stress, and key metabolic factors.

Heiko Topol is a postdoctoral research associate with a background in mechanical engineering. The co-lead principal investigators for this project are CMU-Q’s Hasan Demirkoparan and Thomas Pence from Michigan State University.

SLATE-Q: Making writing expectations explicit through interdisciplinary collaborations

University students are expected to write analytically and argumentatively, but many lack the awareness or language control, and assignments often do not make expectations explicit. A collaboration between applied linguists and information systems faculty members, this study has developed pedagogical interventions to support learners as they write effective, analytical texts.

The SLATE-Q team is led by Silvia Pessoa and includes CMU-Q principal investigators Selma Limam Mansar, Maria Pia Gomez Laich, Divakaran Liginlal, Thomas Mitchell, and Susan Hagan. The team also includes Ahmar Mahboob, University of Sydney, and Ryan Miller, Kent State University.
Bacteriophages in wastewater: isolation and use

Water security and sustainability in Qatar is a critical issue, since the only source of drinking water is the desalinated seawater from the Arabian Gulf. Water quality and safety is a key component of water security. This project aims to isolate and use bacteriophages as biomonitoring tools in wastewater treatment plants to validate the efficacy of the treatment process.

Annette Vincent is the program director of biological sciences and the lead principal investigator for this project. The principal investigators include CMU-Q’s Valentin Ilyin and Basem Shomar from HBKU’s Qatar Environment and Energy Research Institute.

A comparison of the impact of the Basel Standards upon Islamic and conventional bank risks in the Gulf State Region

Subsequent to the 2008 global crisis, Basel III has proposed some major changes to banking regulations. This project is a comparative study of the Islamic and conventional banking sector risks using market data generated from a sample of publicly listed Islamic and conventional banks in the Gulf Cooperation Council (GCC) region.

John O’Brien and Fuad Farooqi are part of the business administration faculty at CMU-Q, teaching courses in finance and accounting. In addition to Islamic finance, their research interests lie in the areas of fintech and the blockchain.

Formalization of automated trading systems in a concurrent linear framework

By formally representing the core of a financial exchange as a set of logical formulas, it is possible to both run the exchange and prove properties about it. This project uses a concurrent and linear framework to model a financial order matching system where buy and sell orders are matched according to the price-time priority.

Dragiša Žunić was a postdoctoral research associate who worked with co-lead principal investigators CMU-Q’s Giselle Reis and CMU’s Iliano Cervesato on this project.

Role of the PDZ and LIM containing protein Zasp in integrin-mediated cell adhesion

In multicellular organisms, cells attach to each other and the matrix around them using specific adhesion proteins called integrins to form functional tissues and organs. Cells can regulate their adhesion to move, migrate and invade. This study focuses on how cells regulate integrin function, which could help better understanding how normal cells function and how disease onset takes place.

Mohamed Bouaouina is an assistant teaching professor of biological science at CMU-Q and lead principal investigator on the project..
Ongoing Externally Funded Research Projects

National Priorities Research Program, Qatar National Research Fund

a. Role of the PDZ and LiM containing protein Zasp in integrin-mediated cell adhesion.
   Lead PI: Mohamed Bouaouina

b. Teams of aquatic/aerial robots for marine environmental monitoring (TARMEM)
   Lead PI: Gianni Di Caro
   Subaward partners:
   PI: Enrico Simetti, University of Genova
   PI: Filippo Arrichiello, University of Cassino and Southern Lazio

c. Personalised Drug Selection for Cancer Treatment in Qatar
   PI: Valentin Ilyin
   Subcontract with Hamad Medical Corporation (HMC):
   LPI: Peter Coveney, University College London
   Co-LPI: Mohamad Ussama Al Homsi, HMC

d. Arab author profiling for cyber-security
   Lead PI: Anis Charfi
   Subaward partners:
   PI: Wajdi Zaghouani, Hamad Bin Khalifa University
   PI: Abdelmajid Ben Hamadou, Centre de Recherche en Numérique de Sfax, Tunisia
   PI: Paolo Ross, Polytechnic University of Valencia, Spain

e. Scalable analytics engine for big graphs on the cloud
   Lead PI: Mohammad Hammoud
   Subaward partners:
   PI: Tamar Elsayed, Qatar University
   PI: Rami Melhem, University of Pittsburgh

f. Molecular profiling of breast cancer transcriptome and splicing aberrations
   Lead PI: Ihab Younis

g. New mathematical models for the large strain swelling response of biological tissues: Applications to edema, inflammation, and pregnancy
   Co-Lead PI: Hasan Demirkoparan
   Lead PI: Thomas Pence, Michigan State University, UA
h. Towards mobile opportunistic cloud computing: Enabling generic computation offloading to extreme heterogeneous entities  
Lead PI: Khaled Harras
QHCN: Towards reliable and efficient mHealth system with multimodal processing and communications for effective remote patient diagnosis  
PI: Khaled Harras  
Subcontract with Qatar University (QU):  
Lead PI: Amr Mohamed, QU

i. SLATE-Q: Scaffolding literacy in academic and tertiary environments: The case of communication in information systems  
Lead PI: Silvia Pessoa  
PI: Maria Pia Gomez Laich  
PI: Selma Limam Mansar  
PI: Thomas Mitchell  
PI: Susan Hagan  
PI: Divakaran Liginlal  
Subaward partners:  
PI: Ryan Miller, Kent State University  
PI: Ahmar Mahboob, University of Sydney

j. Bringing computer science to secondary schools – Curriculum design and implementation  
Lead PI: Saquib Razak

k. MADAR: Multi-Arabic dialect applications and resources  
Co-Lead PI: Kemal Oflazer  
PI: Houda Bouamor  
Subaward partners:  
Lead PI: Nizar Habash, New York University Abu Dhabi  
PI: Owen Rambow, Columbia University in the City of New York

l. Testing English reading comprehension through deep text analysis and question generation  
Lead PI: Kemal Oflazer  
PI: Teruko Mitamura, Carnegie Mellon University

m. Automated verification of properties of concurrent, distributed and parallel specifications with applications to computer security  
Co-Lead PI: Giselle Reis  
Lead PI: Iliano Cervesato, Carnegie Mellon University  
Subaward partner:  
PI: Carsten Schürmann, University of Copenhagen

n. Using bacteriophages as biomonitoring tools for water quality measurements  
Lead PI: Annette Vincent  
PI: Valentin Ilyin  
Subaward partner:  
PI: Basem Shomar, Qatar Environment and Energy Research Institute (QEERI), HBKU

Qatar Foundation World Innovation Summit for Education (WISE)

o. Language policy in globalized contexts  
LPI: Dudley Reynolds
Student Research

Through research projects, students develop the skills of intellectual rigor and creative problem solving that are integral to their careers and future studies.

QSIURP 2018 awards

Through Qatar Student-Initiated Undergraduate Research Program projects, students develop research skills by working on projects that are driven by their interests. The projects are research, scholarly, or artistic activities that lead to the production of new knowledge, increased problem-solving capabilities, original, critical, or historical theory and interpretation, or the production of art.

- **Sayedah Amir**: Role of Kindlin-2 in breast cancer cell adhesion and migration
  Faculty advisor: **Mohamed Bouaouina**

- **Mohammed Yusuf Ansari** and **Maimoon Siddiqui**: Developing a group study mobile application by researching human computer interaction
  Faculty advisor: **Giselle Reis**

- **Aya Nour**: Effect of p38α-dependent AUF1 phosphorylation on transcription factor ATF3 stabilization
  Faculty advisor: **Ihab Younis**

- **Julian Sam** and **Sameer Ahmad**: Code translation for implementing a functional assertion engine in SML
  Faculty advisor: **Giselle Reis**
International conferences

- IEEE Local Computer Networks Conference, Shaden Shaar, Chicago, Illinois
- CIKM 2018 International Conference on Information and Knowledge Management, Omar Khattab, Turin, Italy
- iGEM 2018 Giant Jamboree competition, Kaan Aksoy, Dina Altarawneh, Joana Khatib, Maimoon Siddiqui, Boston, USA
- 17th IEEE International Conference on Machine Learning and Applications, Shaden Shaar, Orlando, USA

Senior Honors theses

- **Al-Dana Al-Mohannadi**: Toward enhancing technology use in Qatar’s public schools
  Faculty advisor: Susan Hagan
- **Khalid Al-Naemi**: Integrin-mediated signaling in breast cancer cells
  Faculty advisor: Mohamed Bouaouina
- **Najlaa Al-Thani**: Metagenomic analysis of DNA and RNA profiles in ballast water
  Faculty advisor: Annette Vincent
- **Sayed Amir**: Role of Kindlin-2 in breast cancer cell adhesion and migration
  Faculty advisor: Mohamed Bouaouina
- **Aisha Fakhroo**: PTEN gene encodes a ncRNA that acts as a potent tumor suppressor in breast cancer
  Faculty advisor: Ihab Younis
- **Kawthar Jafarian**: Molecular tools for microbial viability assessment in environmental samples: Case study of ballast water
  Faculty advisor: Annette Vincent
- **Youssef Kanbour**: Targeted demethylation of CpG islands
  Faculty advisor: Ihab Younis
- **Omar Khattab**: A distributed, graph-based framework for information retrieval
  Faculty advisor: Mohammad Hammoud
- **Aya Nour**: The effect of p38α kinase on binding of AUF1 protein to ATF3 transcripts in breast cancer
  Faculty advisor: Ihab Younis
Meeting of the Minds

The annual Meeting of the Minds symposium featured research projects from all five programs of study, including 26 from undergraduate students. Expert judges represented organizations from across Qatar.

CMU-Q awards

Best project: First place
- **Omar Khattab**, IRg: A distributed graph-based framework for information retrieval
  Advisor: **Mohammad Hammoud**

  Khattab created a novel framework that makes it easier and more efficient for information retrieval experts to develop and deploy scalable search engines. Large-scale information retrieval is central to many applications like web and e-commerce searches.

Best project: Second place
- **Beom Jin Jayden Park** and **Hawra Al-Saygh**, Effect of aspartame on kinetics of calf intestinal alkaline phosphatase
  Advisor: **Annette Vincent**

Best project: Third place
- **Youssef Kanbour**, Re-expression of BCRA1 using targeted DNA demethylation in breast cancer cells
  Advisor: **Ihab Younis**

Best poster design
- **Al-Dana Al-Mohannadi**, Educating girls in Qatar: Toward enhancing technology use in public schools
  Advisor: **Susan Hagan**
Planning and Statistics Authority awards

For many years, the Planning and Statistics Authority has supported undergraduate research at CMU-Q with special awards for projects relevant to Qatar.

The awards from the Planning and Statistics Authority were announced by Dr. Barak Yehya, a longtime friend and supporter of CMU-Q.

- **Aisha Fakhroo, Boshra Al-Sulaiti** and **Reem Elasad**, PTEN gene encodes a ncRNA that acts as a potent tumor suppressor in breast cancer
  Advisor: **Ihab Younis**

- **Kawthar Al-Sadat**, Molecular tools for microbial viability assessment in environmental samples: Case study of ballast water
  Advisors: **Basem Shomar**, Qatar Environment and Energy Research Institute, and **Annette Vincent**

- **Al-Dana Al-Mohannadi**, Educating girls in Qatar: Toward enhancing technology use in public schools
  Advisor: **Susan Hagan**

- **Faiq Defiandry**, What does the eye say?
  Advisor: **Jennifer Bruder**

- **Anis Charfi, Esraa Mohamad** and **Syed Mehdi**, Deception detection in Arabic text

This year’s QNRF awards were presented by senior program manager for ICT at QNRF, **Dr. Munir Tag**.

- **Albandari Al-Khater**, Modulating PARP1 splicing in breast cancer as potential therapeutic approach
  Advisor: **Ihab Younis**

- **Omar Khattab**, IRg: A distributed graph-based framework for information retrieval
  Advisor: **Mohammad Hammoud**

- **Anis Charfi, Syed Mehdi** and **Esraa Mohamad**, ARAP – Author profiling and its application for market segmentation

QNRF undergraduate awards

Qatar National Research Fund and CMU-Q have a long history of partnership and collaboration, and the fruits of this partnership are on display at Meeting of the Minds. Many of the student projects are off-shoots of larger, faculty-led projects that have been generously funded by QNRF.

31 posters

21 external judges
Meeting of the Minds
Posters

**Biological Sciences**

Effects of pH and temperature on the activity of alkaline phosphatase from sheep's brain, **Sara AlDarwish, Maha AlTamimi**

Effect of high temperatures on alkaline phosphatase isolated from *Escherichia coli*, **Khulood Al-Haroon, Noora Al-Shukri**

Kinetic study on effects of the inhibitor L-Phenylalanine on calf intestinal alkaline phosphatases, **Haya Alkaabi, Naila AlSowaidi**

Comparing thermostability and enzyme kinetics of bacterial alkaline phosphatase and calf-intestinal alkaline phosphatase at high temperatures, **Reem Al-Karbi, Sondoss Hassan**

Modulating PARP1 splicing in breast cancer as potential therapeutic approach, **Albandari Al-Khater**

Integrin-mediated signaling in breast cancer cells, **Khalid Al-Naemi**

Molecular tools for microbial viability assessment in environmental samples: Case study of ballast water, **Kawthar Al-Sadat**

Metagenomic analysis of DNA and RNA profiles in ballast water, **Najlaa Al-Thani**

Role of kindlin-2 in breast cancer cell adhesion and migration, **Sayed Sakina Amir**

Role of P21 in the regulation of apoptosis in breast cancer tumor formation, **Sayed Sakina Amir**

PTEN gene encodes a ncRNA that acts as a potent tumor suppressor in breast cancer, **Aisha Fakhroo, Boshra Al-Sulaiti, Reem Elasad**
**Biological Sciences (continued)**

- Expression and purification of dihydrofolate reductase, **Dona Ferdinando, Muhammad Nahin Khan**
- Effect of EDTA on enzymatic activity of calf intestinal alkaline phosphatase, **Muhammad Nahin Khan, Dona Ferdinando**
- The role of p38α kinase in regulating AUF1 binding to ATF3 transcripts in breast cancer, **Aya Nour**
- Effect of aspartame on kinetics of calf intestinal alkaline phosphatase, **Beom Jin Jayden Park, Hawra Al-Saygh**
- Assessing the catalytic activities of purified placental alkaline phosphatase and alkaline phosphatase from MDA.MB.231 cancer cell-line, **Reema Subeh, Zahra Al-Raisi**

**Business Administration**

- Near-optimal dynamic pricing strategies for selling limited inventory to rational customers, **Shireen Ahmed, Fahad Bahzad, Abraham Farooqui**
- Supporting students development of self-authorship and reflective judgement, **Zeina Darwiche**
- Two-sided matching with random utility and outside options, **Anthony Lo, Fariza Shiyap, Xinyu Ma**
- Design of service points in queueing networks, **Madhvi Menon, Menatalla Mahmoud**

**Computational Biology**

- Re-expression of BRCA1 using targeted DNA demethylation in breast cancer cells, **Youssef Kanbour**

**Computer Science**

- Code translation for implementing a functional assertion engine in SML, **Sameer Ahmad, Julian Sam**
- IRg: A distributed graph-based framework for information retrieval, **Omar Khattab**

**Information Systems**

- Educating girls in Qatar: Toward enhancing technology use in public schools, **Al-Dana Al-Mohannadi**
- What does the eye say?, **Faiq Defiandry**
- Effect of language direction on spatial cognition, **Masooma Zehra, Danish Memon**

**Postgraduate posters**

- An oracle hierarchy for small one-way finite automata, **Malek Anabtawi, Sabit Hassan, Christos Kapoutsis, Mohammad Zakzok**
- MADAR Twitter user dialect identification, **Houda Bouamor, Nizar Habash, Sabit Hassan, Kemal Oflazer**
- ARAP – Author profiling and its application for market segmentation, **Anis Charfi, Syed Mehdi, Esraa Mohamad**
- Deception detection in Arabic text, **Anis Charfi, Esraa Mohamad, Syed Mehdi**
- Supporting students writing case analysis in information systems and organizational behavior, **Silvia Pessoa, Maria Pia Gomez Laich, Thomas Mitchell, Michael Maune**
Our stories

The stories of the CMU-Q community are part of the larger story of Qatar’s transformation into a knowledge-based economy. Throughout the year we share our achievements, milestones and impact so the Qatar community can help us celebrate our contributions to the Qatar National Vision.
Public Relations

Through marketing and public relations, we share our achievements with the community, reach out to bright and ambitious high school students, and raise awareness of our talented graduates to potential employers.

CMU-Q in the news
Local, regional and international media published 444 articles about our events and accomplishments over the academic year.

Top news stories

- Qatar high school students learn about careers, college life at CMU-Q summer program
- Carnegie Mellon and Jassim and Hamad Bin Jassim Charitable Foundation promote computer science education
- Her Excellency Sheikha Hind attends inaugural Experience CMU-Q event
- CMU-Q student wins gold for football-related invention
- Carnegie Mellon Qatar discovers new avenue of investigation for breast cancer therapy
- Carnegie Mellon team wins Quick Startup 2019 with idea to enhance driver safety
- Global LNG market’s changing dynamics require Qatar to adjust its strategy, says Amiri Diwan Economic Advisor
- Carnegie Mellon University in Qatar celebrates 78 new graduates
- A decade of success: CMU-Q celebrates 10-year anniversary of first graduating class
- Carnegie Mellon students meet president of Rwanda to discuss the power of education
Digital channels

We reach out to our audiences through several digital channels by producing stories, event posters, photo galleries, and video, and then promoting that content through targeted use of social media.

Focus groups

Since the digital habits of pre-college students change so rapidly, we conduct focus groups to better understand how they use digital media. In 2018, these focus groups revealed that video, on nearly every digital channel, is the preferred medium.

Digital marketing

Through strategic use of sponsored social media, as well as online display and search engine ads, we increase awareness of CMU-Q with a wide, international audience.

<table>
<thead>
<tr>
<th>105</th>
<th>128</th>
</tr>
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<tbody>
<tr>
<td>news stories</td>
<td>Instagram posts</td>
</tr>
</tbody>
</table>

| 156 | 1,215 |
| events supported by MPR | Instagram stories |

| 257,000 | 480 |
| unique website visitors | tweets from @CarnegieMellonQ and @DeanTrick |

Video campaigns

In 2018-19, we more than doubled our in-house video production with several campaigns to reach prospective students. These campaigns included video interviews with faculty members, and program-specific videos to reach students interested in the Business Administration Program.

Overall views on the CMU-Q YouTube channel grew by more than 300% in 2018-19.

4,781 admission leads

25% increase in clicks and swipes

133% increase in ad impressions

Annual Report 2018–19
<table>
<thead>
<tr>
<th>Month</th>
<th>Event Description</th>
</tr>
</thead>
</table>
| July '18 | CMU-Q students place second in BrainHub Neurohackathon  
Carnegie Mellon welcomes Class of 2022  
CMU-Q students share experiences and network at Internship Showcase  
Mindcraft workshops introduce high school students to computer science  
CMU-Q announces Class of 2019 scholars  
CMU-Q graduates showcase diabetes-related research at CUDOS 2018  
CMU delegation at “Summer Davos” discusses role of education, creativity on innovation |
| Aug '18 | CMU-Q invites new students to make their mark  
Qatar high school students learn about careers, college life at CMU-Q summer program |
| Sep '18 | Carnegie Mellon welcomes Class of 2022  
Alumni startup named ICT Exporter of the Year  
CMU-Q students share experiences and network at Internship Showcase  
CMU-Q announces Class of 2019 scholars  
CMU-Q graduates showcase diabetes-related research at CUDOS 2018  
CMU delegation at “Summer Davos” discusses role of education, creativity on innovation |
| Oct '18 | Carnegie Mellon Qatar honors 106 students for academic excellence  
Health and Wellness Fair brings together Education City community  
Carnegie Mellon Qatar and Fifty One East sign partnership agreement  
CMU-Q students develop CRISPR test for carriers of sickle cell anemia  
Qatar Central Bank Governor outlines multifaceted approach to financial technology  
CMU-Q’s Chadi Aoun: “We have the means to stop global warming”  
CMU-Q signs Memorandum of Understanding with QLife Pharma  
Her Excellency Sheikha Hind attends inaugural Experience CMU-Q event  
Qatar Living features CMU-Q alumna Farha Khan  
Global LNG market’s changing dynamics require Qatar to adjust its strategy, says Amiri Diwan Economic Advisor  
CMU-Q’s Ben Reilly shares research with Qatar Foundation community  
INJAZ Qatar honours its education partners  
Carnegie Mellon Qatar student team wins in Oman programming competition  
26 nations represented in CMU-Q incoming class  
A decade of innovation: Information Systems at Carnegie Mellon Qatar  
Jahanian installed as Carnegie Mellon’s 10th president  
Carnegie Mellon Qatar discovers new avenue of investigation for breast cancer therapy  
QSTP paves way for young entrepreneurs  
CMU-Q hosts top technology employers to share expertise |
| Nov ‘18 | U.S. Embassy celebrates local talent at 3rd Young Writers Open Mic Night |
| CMU-Q signs Memorandum of Understanding with Abu Issa Holding |
| Artificial Intelligence in focus at CMU-Q lecture |
| New CMU-Q Dean's Panel Series delves into challenges, opportunities in Qatar |
| Carnegie Mellon grads reflect on rich learning opportunities within Qatar |
| Five years later: Carnegie Mellon business grads discuss building careers in Qatar |
| CMU-Q builds mentorship network to encourage students interested in consulting |
| Lecture series explores the birth of calculus |

| Dec ‘18 | CMU-Q alum places third in University of Pittsburgh IBM Bluehack |
| Research builds collaboration between disciplines to improve student writing |
| CMU-Q students celebrate social responsibility, power of education |
| A decade of success: CMU-Q celebrates 10-year anniversary of first graduating class |
| CMU-Q alums and seniors win MetLife Innovation Award at INJAZ AlArab |
| Carnegie Mellon Qatar celebrates Qatar National Day at Darb Al Saai |
| Dudley Reynolds leads WISE roundtable on language policy in education |
| CMU-Q teams place 2nd and 3rd at QU business competition |
| CRA, QU and CMU-Q collaborate to issue guidelines on IPv6 transition |

<p>| Jan ‘19 | CMU-Q lends expertise to Qatar-wide transition to new internet protocol |
| CMU-Q students explore Dublin business hub |
| CMU-Q and GBI agreement to promote scientific research and exchange expertise |
| Carnegie Mellon and Jassim and Hamad Bin Jassim Charitable Foundation promote computer science education |
| Dean welcomes prospective undergraduate students to ‘Experience CMU-Q’ |
| CMU-Q hosts dinner for Class of 2023 students |</p>
<table>
<thead>
<tr>
<th>Feb '19</th>
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<tbody>
<tr>
<td>The Peninsula: CMU-Q to play bigger role in Qatar’s economic diversification</td>
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<td>Students, alumni connect at Dinner With Twelve Tartans</td>
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<tr>
<td>Ethics should be integral to artificial intelligence development, says Carnegie Mellon expert</td>
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<tr>
<td>Qatar Academy wins 15th edition of Botball at CMU-Q</td>
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<td>CMU-Q student wins gold for football-related invention</td>
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<td>UN's Neil Walsh discusses cybercrime in CMU-Q Dean's Lecture Series</td>
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<td>Cognition expert explores the nuances of human-robot interactions</td>
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<td>Qatar Shell chairman discusses human and sustainable development at CMU-Q Dean's Lecture Series</td>
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<td>CMU-Q students explore internships, jobs at Education City Career Fair 2019</td>
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<tr>
<td>CMU-Q, Barzan Holdings sign MoU to promote scientific research</td>
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<tr>
<td>Alums share keys to job-hunting success</td>
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<tr>
<td>QNL's Christopher Alario investigates mysterious Qatar on historical maps</td>
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<td>CMU-Q students on top teams at Arab Innovation Academy 2019</td>
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<table>
<thead>
<tr>
<th>Mar '19</th>
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<tbody>
<tr>
<td>Carnegie Mellon Qatar honors 105 students for academic excellence</td>
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<tr>
<td>CMU-Q hosts Qatar hub for Google Hash Code competition</td>
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<td>Student consulting club tackles Coca-Cola business case</td>
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<td>Alumnae recognized by Amir for academic excellence</td>
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<td>Knowledge transfer is key to Qatar’s development says Siemens CEO</td>
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<td>CMU president to speak on effect of tech disruption on higher education</td>
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<tr>
<td>Al Arqam Academy wins first place at Carnegie Mellon programming competition</td>
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<td>CMU-Q, Regency Group Holding sign MoU to promote collaboration and joint research</td>
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<td>American School of Doha wins CMU-Q Pi Day Math Contest</td>
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<td>CMU-Q prepares you for lifelong learning, says alumni panel</td>
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<td>Dame Natalie Massenet shares insights at Education City Speaker Series</td>
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<tr>
<td>CMU-Q places second at Oman programming bootcamp</td>
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<tr>
<td>CMU-Q showcases Mindcraft Junior, Alice Middle East at National Science Research Week</td>
</tr>
</tbody>
</table>
Apr ’19
- Carnegie Mellon team wins Quick Startup 2019 with idea to enhance driver safety
- CMU-Q students sweep men’s division of the Qatar University Math Championship
- Students explore sustainability and resilience in Greece
- Employers share job search insights with CMU-Q students
- CMU-Q’s Dudley Reynolds kicks off inaugural English Language Centre symposium
- Carnegie Mellon alumni welcome the Class of 2019
- Time management tool for students wins top prize at Carnegie Mellon Hackathon
- Carnegie Mellon University in Qatar welcomes Class of 2023
- Carnegie Mellon was a transformative experience for grad speaker Amer Ahmad
- CMU-Q team wins Qatar Stock Exchange competition
- CMU-Q faculty members speak on learning and politics at Texas A&M Qatar conference
- CMU-Q football team wins Qatar Foundation championship cup
- CMU-Q opened doors to a career in research, says computer science grad Omar Khattab

May ’19
- CMU-Q’s bio sci program provided meaning, inspiration for 2019 grad Aisha Fakhroo
- Search engine research wins best project at Carnegie Mellon symposium
- Exploration, competition and community at CMU-Q shaped business administration grad Mohamed Hamdi
- Carnegie Mellon University in Qatar celebrates 78 new graduates
- Amir, Sheikha Moza attend Qatar Foundation’s convocation ceremony
- CMU-Q recognizes 43 graduating seniors for academic excellence and leadership
- Serkan Akgüç receives Meritorious Teaching Award 2019
- Gulf Times hosts innovative and enterprising CMU-Q graduates
- Computer science grad receives Carnegie Mellon School of Computer Science award for research
- CMU-Q’s Dan Phelps contributes to nursing informatics initiative at Hamad
- Smart about Smart Cities

Jun ’19
- CMU-Q researchers explore the mathematics of personalized medicine
- CMU-Q grad named regional finalist for UN Young Champions of the Earth
- Dudley Reynolds delves into language learning for WISE 2019
- Carnegie Mellon students meet president of Rwanda to discuss the power of education
Our Faculty, Our Leadership, Our Partners
<table>
<thead>
<tr>
<th>Joint Advisory Board</th>
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<tbody>
<tr>
<td><strong>Qatar Foundation members</strong></td>
</tr>
<tr>
<td><strong>H.E. Dr. Hessa Sultan Al Jaber</strong></td>
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<tr>
<td>Chairperson, Es'hailSat, The Qatar Satellite Company</td>
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<tr>
<td><strong>H.E. Sheikh Faisal Bin Qassim Al Thani</strong> (Spring 2019)</td>
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<tr>
<td>Chairman, Al Faisal Holding</td>
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<tr>
<td><strong>H.E. Sultan Al-Khater</strong> (Fall 2018)</td>
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<td>Undersecretary, Ministry of Economy and Commerce</td>
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<td><strong>Ahmad Hasnah</strong> (Fall 2018)</td>
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<td>President, Hamad Bin Khalifa University</td>
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<tr>
<td><strong>Reem Al Mansoori</strong> (Spring 2019)</td>
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<tr>
<td>Assistant Undersecretary, Digital Society Development Sector, Ministry of Transport and Communications</td>
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<td><strong>Ahmed Elmagarmid</strong></td>
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<tr>
<td>Executive Director, Qatar Computing Research Institute, Hamad Bin Khalifa University</td>
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<td><strong>Carnegie Mellon University members</strong></td>
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<tr>
<td><strong>James H. Garrett, Jr.</strong> (Spring 2019)</td>
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<td>Provost and Chief Academic Officer</td>
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<tr>
<td><strong>Laurie Weingart</strong> (Fall 2018)</td>
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<td>Interim Provost</td>
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<tr>
<td><strong>Mary Jo Dively</strong></td>
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<tr>
<td>Vice President and General Counsel</td>
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<tr>
<td><strong>William Scherlis</strong></td>
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<tr>
<td>Director, Institute for Software Research</td>
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<tr>
<td>Professor, School of Computer Science</td>
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<tr>
<td><strong>Duane Seppi</strong></td>
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<tr>
<td>The BNY Mellon Professor of Finance</td>
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<td>Tepper School of Business</td>
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<tr>
<td><strong>Independent members</strong></td>
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<td><strong>N. Balakrishnan</strong></td>
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<tr>
<td>Associate Director</td>
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<tr>
<td>Indian Institute of Science</td>
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<tr>
<td><strong>Gabriel Hawawini</strong></td>
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<tr>
<td>The Henry Grunfield Professor of Investment Banking</td>
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<td>INSEAD</td>
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<td><strong>Kurt Mehlhorn</strong></td>
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<td>Director, Max Planck Institute for Informatics</td>
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<td>Saarland University</td>
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<td><strong>Ex officio members</strong></td>
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<td><strong>Mounir Hamdi</strong> (Fall 2018)</td>
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<tr>
<td>Dean, College of Science and Engineering</td>
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<td>Hamad Bin Khalifa University</td>
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<td><strong>Michael Mitchell</strong> (Spring 2019)</td>
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<td>General Counsel, Qatar Foundation</td>
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<tr>
<td><strong>Michael Trick</strong></td>
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<tr>
<td>Dean</td>
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<tr>
<td>Carnegie Mellon University in Qatar</td>
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</table>
# Dean's Office

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Trick</td>
<td>Dean&lt;br&gt;Harry B. and James H. Higgins Professor of Operations Research</td>
</tr>
<tr>
<td>Selma Limam Mansar</td>
<td>Senior Associate Dean, Education&lt;br&gt;Area Head, Information Systems&lt;br&gt;Teaching Professor, Information Systems</td>
</tr>
<tr>
<td>John O’Brien</td>
<td>Senior Associate Dean, Faculty and Outreach&lt;br&gt;Area Head, Business Administration&lt;br&gt;Associate Professor, Accounting and Experimental Economics</td>
</tr>
<tr>
<td>Kemal Oflazer</td>
<td>Associate Dean, Research&lt;br&gt;Area Head, Computer Science&lt;br&gt;Teaching Professor, Computer Science</td>
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<tr>
<td>Fadhel Annan</td>
<td>Assistant Dean, Government and Corporate Affairs</td>
</tr>
<tr>
<td>Edna Jackson</td>
<td>Director, Dean's Office</td>
</tr>
<tr>
<td>Richard Mundy</td>
<td>Chief Operations Officer</td>
</tr>
<tr>
<td>Kara Nesimiuk</td>
<td>Executive Director, Marketing and Public Relations</td>
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<tr>
<td>Khalid Sarwar Warraich</td>
<td>Chief Information Officer</td>
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# Faculty Leadership

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>Khaled Harras</td>
<td>Program Director, Computer Science and Computational Biology&lt;br&gt;Teaching Professor, Computer Science</td>
</tr>
<tr>
<td>Patrick McGinnis</td>
<td>Program Director, Business Administration&lt;br&gt;Distinguished Career Professor, Business Communication</td>
</tr>
<tr>
<td>Marion Oliver</td>
<td>Area Co-Head, Arts and Sciences&lt;br&gt;Teaching Professor, Mathematics</td>
</tr>
<tr>
<td>Daniel Phelps</td>
<td>Program Director, Information Systems&lt;br&gt;Associate Teaching Professor, Information Systems</td>
</tr>
<tr>
<td>Dudley Reynolds</td>
<td>Area Co-Head, Arts and Sciences&lt;br&gt;Teaching Professor, English</td>
</tr>
<tr>
<td>Gordon Rule</td>
<td>Area Head, Biological Sciences&lt;br&gt;Professor, Biological Sciences</td>
</tr>
<tr>
<td>Annette Vincent</td>
<td>Program Director, Biological Sciences&lt;br&gt;Associate Teaching Professor, Biological Sciences</td>
</tr>
<tr>
<td>Faculty Members</td>
<td>Position</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Nesrine Affara</td>
<td>Assistant Teaching Professor, Biological Sciences</td>
</tr>
<tr>
<td>Mustafa Akan</td>
<td>Associate Professor, Operations Management</td>
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<tr>
<td>Serkan Akgüç</td>
<td>Assistant Teaching Professor, Finance</td>
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<tr>
<td>Andres Amerikaner</td>
<td>Visiting Assistant Professor, English</td>
</tr>
<tr>
<td>Chadi Aoun</td>
<td>Associate Teaching Professor, Information Systems</td>
</tr>
<tr>
<td>Ravichandra Bachu</td>
<td>Assistant Teaching Professor, Chemistry</td>
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<tr>
<td>Serra Boranbay-Akan</td>
<td>Assistant Teaching Professor, Economics</td>
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<tr>
<td>Houda Bouamor</td>
<td>Visiting Assistant Professor, Information Systems</td>
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<tr>
<td>Mohamed Bouaouina</td>
<td>Assistant Teaching Professor, Biological Sciences</td>
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<tr>
<td>Jennifer Bruder</td>
<td>Assistant Teaching Professor, Psychology</td>
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<tr>
<td>Lauren Burakowski</td>
<td>Assistant Teaching Professor, Psychology</td>
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<tr>
<td>Stephen Calabrese</td>
<td>Visiting Associate Professor, Economics</td>
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<td>Anis Charfi</td>
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<td>Milton Cofield</td>
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<td>Hasan Demirkoparan</td>
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<td>Fuad Farooqi</td>
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<td>Ebru Genç</td>
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<td>Pia Gomez Laich</td>
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<td>David Emmanuel Gray</td>
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<td>Susan Hagan</td>
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<tr>
<td>Mohammad Hammoud</td>
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<tr>
<td>Khaled Harras</td>
<td>Program Director, Computer Science and Computational Biology</td>
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<td>Erik Helin</td>
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<td>Ludmila Hyman</td>
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<td>Zeinab Ibrahim</td>
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<td>Valentim Ilyin</td>
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<td>Aaron Jacobson</td>
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<tr>
<td>Lansiné Kaba</td>
<td>Thomas M. Kerr Distinguished Career Professor</td>
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<td>Christos Kapoutsis</td>
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<td>Niraj Khare</td>
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<tr>
<td>Ramesh Krishnamurti</td>
<td>Professor, Architecture</td>
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<tr>
<td>Cecile le Roux</td>
<td>Visiting Assistant Professor, Organization and Behavior</td>
</tr>
<tr>
<td>Divakaran Liginlal</td>
<td>Teaching Professor, Information Systems</td>
</tr>
<tr>
<td>Name</td>
<td>Position and Responsibilities</td>
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| Selma Limam Mansar          | Senior Associate Dean, Education  
                                Area Head, Information Systems  
                                Teaching Professor, Information Systems                                                                 |
| Teresa MacGregor            | Director, Library                                                                             |
| Patrick McGinnis            | Program Director, Business Administration  
                                Distinguished Career Professor, Business Communication |
| Thomas Mitchell             | Associate Teaching Professor, English                                                        |
| John O’Brien                | Senior Associate Dean, Faculty and Outreach  
                                Area Head, Business Administration  
                                Associate Professor, Accounting and Experimental Economics |
| Kemal Oflazer               | Associate Dean, Research  
                                Area Head, Computer Science  
                                Teaching Professor, Computer Science                                                                 |
| Marion Oliver               | Area Co-Head, Arts and Sciences  
                                Teaching Professor, Mathematics                                                                 |
| Taeyong Park                | Visiting Assistant Teaching Professor, Statistics                                            |
| Silvia Pessoa               | Associate Teaching Professor, English                                                        |
| Daniel Phelps               | Program Director, Information Systems  
                                Associate Teaching Professor, Information Systems |
| Saquib Razak                | Associate Teaching Professor, Computer Science                                               |
| Benjamin Reilly             | Teaching Professor, History                                                                  |
| Giselle Reis                | Assistant Teaching Professor, Computer Science                                               |
| Dudley Reynolds             | Area Co-Head, Arts and Sciences  
                                Teaching Professor, English                                                                 |
| Ryan Riley                  | Associate Teaching Professor, Computer Science                                               |
| Gordon Rule                 | Area Head, Biological Sciences  
                                Professor, Biological Sciences                                                               |
| Alicia Salaz                | Senior Librarian and Information Scientist                                                    |
| Peter Stüttgen              | Visiting Associate Teaching Professor, Marketing                                              |
| Michael Trick               | Dean  
                                Harry B. and James H. Higgins Professor of Operations Research                             |
| Nui Vatanasakdakul          | Visiting Associate Professor, Information Systems                                            |
| Annette Vincent             | Program Director, Biological Sciences  
                                Associate Teaching Professor, Biological Sciences                                           |
| George White                | Distinguished Career Professor, Entrepreneurship                                              |
| Zelealem Yilma              | Assistant Teaching Professor, Mathematics                                                     |
| Bonnie Youngs               | Teaching Professor, French and Francophone Studies                                            |
| Ihab Younis                 | Assistant Teaching Professor, Biological Sciences                                             |
| Mohamed Zayed               | Associate Teaching Professor, Physics                                                          |
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Annual Report 2018–19
About Us

For more than a century, Carnegie Mellon University has challenged the curious and passionate to imagine and deliver work that matters. A private, top-ranked and global university, Carnegie Mellon sets its own course with programs that inspire creativity and collaboration.

In 2004, Carnegie Mellon and Qatar Foundation began a partnership to deliver select programs that will contribute to the long-term development of Qatar. Today, Carnegie Mellon Qatar offers undergraduate programs in biological sciences, business administration, computational biology, computer science, and information systems. More than 400 students from 48 countries call Carnegie Mellon Qatar home.

Graduates from CMU-Q are pursuing their careers in top organizations within Qatar and around the world, and many have started their own entrepreneurial ventures. With 12 graduating classes, the total number of alumni is more than 800.

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