



مؤسسة قطر
Qatar Foundation



معهد قطر لبحوث الحوسبة
Qatar Computing Research Institute

Key technologies

Cutting-edge computing nurtures the future and underpins Qatar's quest for excellence

Being a leader in key technologies is vital to the growth of Qatar, and QCRI is working hard to define and implement a national computing research program that is aligned with the Qatar National Research Strategy and that supports the strategic priorities outlined in the country's national vision 2030.

An essential aspect of this vision is creating career opportunities for Qatar's computer science graduates and establishing internships to train and nurture them.

At the same time, we are working to educate society and the public, and helping to implement the national Qatarization program.

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Qatari scientists brought on board to pursue careers in computing research

24

students from prestigious universities brought on as QCRI interns

67

experts from 25 countries work for QCRI

WE ARE THE ONLY ORGANIZATION IN THE REGION WHOSE MISSION IS SOLELY FOCUSED ON PERFORMING CUTTING-EDGE APPLIED COMPUTER RESEARCH

Patently excellent

Computing research is at the core of research in many fields

Supporting innovation which promotes Qatar's core priorities is key to creating a knowledge-based multicultural society that will benefit the entire Arab region.

An essential part of this process is cutting-edge research, which through peer review and publication in leading professional journals will become standard references for each particular discipline.

Our work, which covers such areas as Arabic language technologies, social computing, data analytics and cloud computing, has resulted in more than 47 patents filed in the UK and US.

QCRI scientists:

- Have more than 24,138 citations
- Have an H-Index ranging from eight to 47, with an average of 22
- Serve on 14 editorial boards of international journals and as chief editors of two editorial boards

The real world

As a world-class organization, we pursue research that engages all our stakeholders in order to produce measurable results that work in the real world.

QCRI applies forward-looking, futuristic solutions to scientific and technological challenges. We build and we consolidate - but we also think outside the box. Our research reflects a local agenda with global impact.

Filed more than **47** patents in US and UK Patent Offices as well as PCT, the World Intellectual Property Organization in Geneva

ONLY A RESEARCH INSTITUTE OF OUR SIZE AND CALIBER CAN CREATE THE CONTINUITY NEEDED TO BRING PROMISING RESEARCH TO FRUITION

Commercial reality

Leadership in vital areas of Qatar's business vision is the keystone of our strategic aim

Our strategic aims are designed to underscore standards of excellence in all our areas of research and development.

These include achieving global leadership in Arabic language technologies and being a recognized leader in areas vital to the growth of Qatari businesses.

We also develop intellectual property, including patent applications, software and licensing that can be commercialized through Qatar Science & Technology Park.

THE AIM IS TO ENRICH ARAB WEB CONTENT WITH OUR BEAUTIFUL HERITAGE: THE POEMS, LANGUAGE, LITERATURE AND SCIENCE THAT ARABS HAVE CONTRIBUTED THROUGHOUT HISTORY. THIS WILL BE DONE THROUGH OUR ARABIC WIKIPEDIA INITIATIVE.

Strategic partnerships formed with Wikimedia, Boeing, European Media Lab and MIT



Capitalizing on expertise

Global links put Qatar's research program top of the agenda

Central to our work is building relationships with global institutions such as MIT, Columbia, Waterloo, Purdue, Yahoo, Google and Microsoft.

This helps us to capitalize on our expertise in Arabic language technologies, social computing and data analytics.

This in turn will define and create a national computing research program focused on projects of strategic importance to Qatar.

Next-generation solutions

Confronting present and future challenges across industry and society will depend on cutting-edge research into next-generation computer hardware and software.

This is at the heart of everything we do, with a clear focus on Qatar's goal of becoming

a knowledge-based society that capitalizes on its achievements.

Qatar Foundation funds computing research at gold-standard institutions worldwide through the Qatar National Research Fund while working closely with Qatar Science & Technology Park.

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software prototypes delivered to Al Jazeera Network - Arabic Video Transcription, Enterprise Arabic Search, and Social Computing Tool

INTEGRATING COMPUTING INTO GOVERNMENT AND SOCIETY WITH THE VERY LATEST TECHNOLOGY CAN HELP ACCELERATE THE COUNTRY'S PACE OF DEVELOPMENT



Arabic language technologies

Distributed systems

Ensuring that the Arabic language flourishes on the internet is a key challenge for our growing team of specialists in speech recognition, machine translation and optical character recognition (OCR).

To help meet the challenge, QCRI has teamed with Wikimedia Foundation, operator of Wikipedia - the world's largest online encyclopedia - to make it easier for the 350 million Arabic speakers world wide to contribute to this ever-growing store of knowledge.

WE ARE LOOKING FORWARD TO THE
POSSIBILITIES FOR NEW PROGRAMS
AND INITIATIVES THAT SUPPORT
THE ARAB COMMUNITY
- WIKIMEDIA FOUNDATION

Local on-site data storage is costly and inefficient, requires huge amounts of energy and creates a significant and growing carbon footprint.

Cloud computing provides giant server farms where corporations and individuals can

store their data, including emails, documents, pictures, films and music libraries.

Providing solutions that are fast, secure, energy efficient and commercially successful is a key priority, and we are at the forefront of this research.



Social computing

Huge amounts of content are created by social networks such as Facebook, Twitter and LinkedIn. This is useful and influential data when curated, stored and applied using bespoke software applications.

For example, we are working with MIT to manage comments

on stories running on Al Jazeera's website, assessing them for positive and negative reactions and then creating snapshots of public opinion.

This technique can also measure views on consumer brands, trends and buying habits, and has enormous commercial potential.



Data analytics

The usefulness of raw information - data - depends on its quality. Conventional wisdom says that poor data quality, because it is either inaccurate or out of date (or both), is the norm in many organizations.

QCRI works on systems to enhance the usability and commercial value of data sets, which will not only significantly assist the Qatari economy but also have many across-the-board applications in the Arab region and beyond.



THE IMPORTANCE OF HIGH QUALITY COMPUTER RESEARCH TO QATAR CANNOT BE OVEREMPHASIZED



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