**PRESS RELEASE**

# New film-making technique jointly developed by HBKU researcher

**Doha, July 12, 2016** – A scientist at the Qatar Computing Research Institute (QCRI), one of Hamad bin Khalifa University's three national research institutes, has jointly developed technology that can recreate films and portraits in the style of different artists' paintings.

QCRI's Dr. Mohamed Elgharib, along with collaborators from Trinity College in Dublin, has devised a technique that can reproduce moving images in an artist's original style.

A paper about the technology, known as non-photo realistic rendering technique, will be presented at the world's largest annual event in computer graphics and interactive techniques, the Special Interest Group on Graphics and Interactive Techniques (SIGGRAPH) conference in California on July 24.

The technology goes several steps further than current state-of-the-art advances in recreating the painting styles of artists such as Vincent Van Gogh. For example, this new technique can maintain the structure of underlying objects in portraits, which are usually difficult to reproduce because abnormalities in people's faces are easily spotted.

"In images like portraits it's very important to maintain the structure of facial features and current approaches will corrupt them. We can more accurately capture the strokes of an original painting than other techniques," Dr Elgharib said.

An example of the effect the technique can achieve is the film Loving Vincent, due for release in September. The world's first full-length painted animation film, which tells the story of the painter Vincent Van Gogh, will be made from 62,450 hand-painted frames completed by 85 painters in Van Gogh's style.

"Current approaches for generating painted movies are manual and they are very expensive in both time and production cost. The total production budget of Loving Vincent is between 5 to 15 million euros. Our approach, however, is fully automated and much cheaper. We just need some servers and we are ready to go," Dr Elgharib said.

The technology also lends itself to selfies, Facebook profile pictures and portraits.

Dr Elgharib and other QCRI scientists are now exploring the use of the same features to solve other problems in analyzing virtual reality content.

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**About Qatar Computing Research Institute**

Qatar Computing Research Institute (QCRI) is a national research institute within Hamad bin Khalifa University. As a national research institute, QCRI aims to build Qatar's innovation and technology capacity by focusing on large-scale computing challenges that address national priorities for growth and development, supporting Qatar's transformation from a hydrocarbon-based economy to a knowledge-based economy. In doing this, QCRI conducts world-class multidisciplinary computing research that is relevant to the needs of Qatar, the wider Arab region, and the world. It performs cutting-edge research in such areas as Arabic language technologies, social computing, data analytics, distributed systems, cyber security and computational science and engineering. The research conducted at QCRI is aligned with the Qatar National Research Strategy and supports the strategic priorities outlined in the Qatar National Vision 2030.

For more information, please visit www.qcri.qa.

**About Hamad bin Khalifa University**

Hamad bin Khalifa University (HBKU), a member of Qatar Foundation for Education, Science and Community Development, is an emerging research university that is building its foundation upon unique collaborations with local and international partners. Located in Education City, HBKU delivers undergraduate and graduate programs through its College of Science and Engineering, College of Law and Public Policy, College of Public Health, Qatar Faculty of Islamic Studies, and its College of Humanities and Social Sciences. It also provides unparalleled opportunities for research and scholarship through its research institutes, and its Center of Executive Education delivers customized programs for the business community of Qatar and the region, in line with Qatar National Vision 2030.