

MBZIRC 2020 to Focus on Role of Robots and Artificial Intelligence as Smart City Solutions

Three Challenges and Triathlon to Have Concepts Highlighting Safety, Construction Automation, and Urban High Rise Fire Fighting Scenarios

ABU DHABI, UNITED ARAB EMIRATES, September 27, 2018 / EINPresswire.com/ -- Khalifa University of Science and Technology, organizers of the Mohamed Bin Zayed International Robotics Challenge (MBZIRC), today announced the next edition of the Challenge, scheduled to take place in February 2020 will focus on the role of robotics and artificial intelligence as smart city solutions.



The announcement was made during a press conference that was attended by Dr. Arif Sultan Al Hammadi, General Co-Chair of MBZIRC 2020 Steering Committee, and Executive Vice-President of Khalifa University of Science and Technology, and Dr. Lakmal Seneviratne, Associate VP for Research, and Director of Khalifa University Center for Autonomous Robotic Systems (KUCARS), as well, Dr. Fahad Al Maskari, Manager, MBZIRC 2020.

MBZIRC is a global robotics competition that aims to provide an environment to foster innovation and technical excellence in robotics, while encouraging spectacular performance with robotics technology.

Themed 'Tackling Challenges, Offering Solutions', MBZIRC 2020 will consist of three individual Challenges and a triathlon style 'Grand Challenge', focusing on robotics solutions in a smart city applications. Safely neutralizing stray drones, construction automation, and urban fire-fighting will be the key challenge focus areas for MBZIRC 2020. The MBZIRC 2020 Call for Proposals will be announced shortly.

Some of the top teams that have expressed their intent to participating in the MBZIRC 2020 include the Carnegie Mellon University, University of Pennsylvania (UPenn), Georgia Tech and Virginia Tech from the US, University of Leeds from the UK, University of New South Wales from Australia, ETH Zurich from Switzerland, Korea Advanced Institute of Science and Technology, Japan's University of Tokyo, India's IIT Kanpur, as well as China's Tsinghua University and Beijing Institute of Technology.

Dr. Arif Sultan Al Hammadi, Chair of MBZIRC 2020 Steering Committee, said: "In line with global trends, the UAE is pioneering the application of artificial intelligence (AI) and robotics in smart city solutions. Some of the areas where robots are already in use in the UAE include, healthcare, transport, education, banking and government services. Very soon, smart robots will offer access to more than 100 UAE government services by eight public entities. The country is also planning

to use robots for security and emergency response to prevent sabotage and security breaches, thus safeguarding critical infrastructure and strategic industry installations. At the same time, advanced robotic technology is also expected to facilitate and usher in the Fourth Industrial Revolution, while helping to reduce the reliance on foreign workers."

Dr. Al Hammadi, added: "Building on the excellent success of the inaugural Challenge, the second edition will push the boundaries in robotics advancements and their applications in a smart city environment. The MBZIRC 2020 Challenges have already generated high global interest as witnessed by more than 200 top international teams expressing their Intent to participate so far. MBZIRC has significantly raised the profile of Abu Dhabi and the UAE in robotics and artificial intelligence (Al) with the first edition of the Challenge attracting 27 top international robotics labs. We believe the second edition of the Challenge will further consolidate the global profile of the event, attracting even more top teams, and cementing the status of the UAE as the place for robotics innovation and technical excellence."

MBZIRC 2020 will address key application challenges such as security, civic emergency response, and construction automation. Challenge 1 requires a team of unmanned aerial vehicles (UAVs) to autonomously track, locate and capture hostile UAVs. Challenge 1 is motivated by UAV safety.

Challenge 2 requires a team of robots (UAVs and unmanned ground vehicles – UGVs) to collaborate and autonomously locate, pick, transport and assemble different types of brick shaped objects to build pre-defined structures, in an outdoor environment. Challenge 2 is motivated by construction automation.

Challenge 3 requires a team of UAVs and UGVs to collaborate and autonomously extinguish a series of simulated fires in a simulated urban high rise building. Challenge 3 is motivated by the use of robots for urban fire-fighting.

The Grand Challenge requires a team of robots (UAVs and UGVs) to compete in a triathlon-type event combining aspects of all three categories. As in the inaugural edition of the Challenge, MBZIRC 2020 will take place in an outdoor, open, arena(s) approximately the size of a football pitch.

The MBZIRC is a biennial international robotics competition that provides an ambitious and technologically demanding set of challenges. The event aims to bring forth the latest advancements in robotics, while giving an opportunity to researchers and industry professionals to showcase their innovation capabilities.

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For more information, please visit: http://www.ku.ac.ae/

Wadhha Saleh Abdulla Ahmed Aljaberi Khalifa University of Science and Technology +971505061144 email us here Visit us on social media: Facebook Twitter LinkedIn

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