

PROGRAM (Advance)

for **A VIRTUAL Topical Event** of

Technical Committee on Measurement and Control of Robotics (TC17)

International Measurement Confederation

THEME: "“Robotics for Risky Interventions and Environmental Surveillance”"

Event Coordinators:

Prof em Y.Baudoin (ICI/RMA/ER KC) ,Vice-Chair TC17,
M.Y.Dubucq (Dir ICI), Prof O.Tokhi (CLAWAR), Dr Ir Zafar Taqvi (Chair IMEKO/TC-17)

Logistic Hosts: IEEE Region 5 Galveston Bay Section

Friday October 8, 2021

Time- US Central (Houston, Chicago)

6:00AM-11:00AM US-Central, 8:00AM-01:00PM Brazil, 1:00PM-6:00 PM Central Europe,4:30 PM-9:30 PM India, 8:00PM-1:00AM Japan

6:00 AM US-Central	<p>Welcome</p> <p>Dr Zafar Taqvi, TC17</p> <p>Prof em Y.Baudoin, M.Y.Dubucq, Prof O.Tokhi</p>
6:05 AM	<p>Keynote: Mobile Robots Supporting Risky Interventions, Humanitarian actions and Demining in particular- promising DISARMADILLO Tool.</p> <p>E.Cepolina (Snail-Aid, Italy) patfordemining@gmail.com; Italian Institute of Technology (IIT), Italy) emanuela.cepolina@iit.it</p> <p>G.De Cubber, Y.Baudoin (RMA, ICI, Belgium) geert.decubber@rma.ac.be</p> <p>yvan.baudoin@ici-belgium.be</p>
6:35 AM	<p>Twisted and Coiled Polymer Muscle Actuated Soft 3D Printed Robotic Hand with Peltier Cooler for Drug Delivery in Medical Management</p> <p>Pawandeep Singh Matharu^{1,2}, Rippudaman Singh^{1,2}, Sanjana Mohapatra^{1,3}, and Yonas Tadesse^{1,2,3,4} ¹The Humanoid Biorobotics and Smart Systems (HBS Lab)</p> <p>²Department of Mechanical Engineering ³Department of Biomedical Engineering,⁴Department of Electrical & Computer Engineering The University of Texas at Dallas Richardson, Texas, USA PSM:psm200001@utdallas.edu, RS: rxs200052@utdallas.edu, SM: sxm200036@utdallas.edu, YT: Yonas.Tadesse@utdallas.edu</p>
6:50 AM	<p>Jelly-Z: Twisted and Coiled Polymer Fishing Line Muscle-actuated Mini-Jellyfish Robot for Environmental Surveillance and Monitoring</p> <p>Pawandeep Singh Matharu^{1,2}, Yara Almubarak^{1,2}, Akash Ashok Ghadge^{1,2}, and Yonas Tadesse^{1,2,3,4} ¹The Humanoid Biorobotics and Smart Systems (HBS Lab)</p> <p>²Department of Mechanical Engineering ³Department of Biomedical Engineering,⁴Department of Electrical & Computer Engineering The University of Texas at Dallas Richardson, Texas, USA PSM:psm200001@utdallas.edu, YA: yara.almubarak@utdallas.edu ,AAG: akashashok.ghadge@utdallas.edu , YT: Yonas.Tadesse@utdallas.edu</p>
7:05 AM	<p>Path planning for data collection robots</p> <p>Sára Olasz-Szabó, István Harmati. Dept. of Control Engineering and Information Technology</p> <p>Budapest University of technology and Economics, Budapest, Hungary</p> <p>olasz-szabo.sara@edu.bme.hu, harmati@iit.bme.hu</p>
7:20 AM	<p>Adaptation of event systems course to accommodate online teaching with a simulated mobile robot</p> <p>^{1st} Adam Sojka <i>Institute of Robotics and Cybernetics Slovak University of Technology in Bratislava</i> Ilkovičova 3, 812 19 Bratislava, Slovakia adam.sojka@stuba.sk</p> <p>^{2nd} Andrej Babinec <i>Institute of Robotics and Cybernetics Slovak University of Technology in Bratislava</i> Ilkovičova 3, 812 19 Bratislava, Slovakia andrej.babinec@stuba.sk</p> <p>^{3rd} Martin Dekan <i>Institute of Robotics and Cybernetics Slovak University of Technology in Bratislava</i> Ilkovičova 3, 812 19 Bratislava, Slovakia martin.dekan@stuba.sk</p>

7:35 AM	<p>Energy autonomy of unmanned ground platforms applied to Robotics for Risky Interventions and Environmental Surveillance</p> <p>Authors: <i>Mikołaj ZARZYCKI¹, Magdalena DUDEK², Andrzej MASŁOWSKI¹</i></p> <p>¹ Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP, Al. Jerozolimskie 202, 02-486 Warszawa, Poland</p> <p>² AGH University of Science and Technology, Faculty of Energy and Fuels, al. A. Mickiewicza 30, 30-059 Kraków, Poland</p> <p>Corresponding author: mikolaj.zarzycki@piap.lukasiewicz.gov.pl</p>
7:50 AM	<p>An Implementation of Low-Cost System-on-Chip with Neural Network for Surveillance Cameras</p> <p>Xiaokun Yang, Assistant Professor, Engineering Department, University of Houston – Clear Lake, USA YangXia@UHCL.edu</p>
	Break
8:20 AM	<p>iGrab Duo: Novel 3D printed Soft Orthotic Hand Triggered by EMG signals</p> <p>Authors: Irfan Zobayed^{1,2}, Drew Miles¹, and Yonas Tadesse^{1,2,3,4}</p> <p>¹Humanoid, Bio-robotics and Smart Systems (HBS) Lab, Mechanical Engineering Department, The University of Texas at Dallas</p> <p>²Biomedical Engineering Department, The University of Texas at Dallas</p> <p>³Electrical and Computer Engineering Department, The University of Texas at Dallas</p> <p>⁴Alan G. MacDiarmid Nanotech Institute, The University of Texas at Dallas</p> <p>Irfan.Zobayed@utdallas.edu</p>
8:35 AM	<p>UAV Assisted Pathfinding in Flooding Area</p> <p>P. Fadimiroye, J. Lu and D. McDowell, University of Houston-Clear Lake, USA</p> <p>FadimiroyeP9469@UHCL.edu</p>
8:50 AM	<p>Kinematic Redundancy Resolution for Robots used in Disaster Search/Rescue and Medical Operation</p> <p>Khoa Le, Luong Nguyen, Thomas Harman, Computer Engineering Department, University of Houston Clear Lake, USA</p> <p>khoale0316@gmail.com</p>
9.05 AM	<p>A simple NBV selection method for smoother exploration of unknown environments</p> <p>Adonisz Dimitriu Department of Control Engineering Budapest University of Technology and Economics Budapest, Hungary d.adonisz96@gmail.com</p> <p>Istvan Harmati Department of Control Engineering Budapest University of Technology and Economics Budapest, Hungary harmati@iit.bme.hu</p>
9:20AM	<p>Micro robot for intravascular therapy”</p> <p>Divyang Patel, Anand, Gujarat, INDIA</p> <p>kachhiadivyang@gmail.com</p>
9:35 AM	<p>Oil Exploration – Role of numerical simulation and inversion</p> <p>Dr. Gulamabbas A. Merchant, Electra-Magnetic Research and Development</p> <p>gabbas@flash.net</p>
9:50 AM	<p>Performance Measurement of Open Shortest Path First Protocol with Failure Recovery in IP Networks</p> <p>Kehinde Gilbert, Sarhan M. Musa, Electrical and Computer Engineering Department Prairie View A&M University Prairie View, Texas</p> <p>kkpokpogbe@pvamu.edu; smmusa@pvamu.edu</p>
10:10 AM	Concluding Remarks

Updates of the program will be posted on www.ISMCR.ORG. REGISTRATION IS LIMITED TO 100 and is FREE.

It is available at

<https://events.vtools.ieee.org/m/278728> but will close a week before the event.