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**

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| 6:00 AM  US-Central | Welcome  Dr Zafar Taqvi, TC17  Prof em Y.Baudoin, M.Y.Dubucq, Prof O.Tokhi |
| 6:05 AM | **Keynote: Mobile Robots Supporting Risky Interventions, Humanitarian actions and Demining in particular- promising DISARMADILLO Tool.**  E.Cepolina (Snail-Aid, Italy) [patfordemining@gmail.com](mailto:patfordemining@gmail.com); Italian Institute of Technology (IIT), Italy) [emanuela.cepolina@iit.it](mailto:emanuela.cepolina@iit.it)  G.De Cubber, Y.Baudoin (RMA, ICI, Belgium) [geert.decubber@rma.ac.be](mailto:geert.decubber@rma.ac.be) [yvan.baudoin@ici-belgium.be](mailto:yvan.baudoin@ici-belgium.be) |
| 6:35 AM | **Twisted and Coiled Polymer Muscle Actuated Soft 3D Printed Robotic Hand with Peltier Cooler for Drug Delivery in Medical Management**  Pawandeep Singh Matharu1,2, Rippudaman Singh1,2, Sanjana Mohapatra1,3, and Yonas Tadesse1,2,3,4 1The Humanoid Biorobotics and Smart Systems (HBS Lab)  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](mailto:Yonas.Tadesse@utdallas.edu) |
| 6:50 AM | **Jelly-Z: Twisted and Coiled Polymer Fishing Line Muscle-actuated Mini-Jellyfish Robot for Environmental Surveillance and Monitoring**  Pawandeep Singh Matharu1,2, Yara Almubarak1,2, Akash Ashok Ghadge1,2, and Yonas Tadesse1,2,3,4 1The Humanoid Biorobotics and Smart Systems (HBS Lab)  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](mailto:Yonas.Tadesse@utdallas.edu) |
| 7:05 AM | **Path planning for data collection robots**  Sára Olasz‑Szabó, István Harmati. Dept. of Control Engineering and Information Technology  Budapest University of technology and Economics, Budapest, Hungary  olasz‑szabo.sara@edu.bme.hu, [harmati@iit.bme.hu](mailto:harmati@iit.bme.hu) |
| 7:20 AM | **Adaptation of event systems course to accommodate online teaching with a simulated mobile robot**   |  |  |  |  | | --- | --- | --- | --- | | 1st Adam Sojka *Institute of Robotics and Cybernetics Slovak University of Technology in Bratislava* Ilkovičova 3, 812 19 Bratislava, Slovakia [adam.sojka@stuba.sk](mailto:adam.sojka@stuba.sk) | 2nd Andrej Babinec *Institute of Robotics and Cybernetics Slovak University of Technology in Bratislava* Ilkovičova 3, 812 19 Bratislava, Slovakia [andrej.babinec@stuba.sk](mailto:andrej.babinec@stuba.sk) | 3rd Martin Dekan *Institute of Robotics and Cybernetics Slovak University of Technology in Bratislava* Ilkovičova 3, 812 19 Bratislava,   |  | | --- | | [martin.dekan@stuba.sk](mailto:martin.dekan@stuba.sk) | | |
| 7:35 AM | **Energy autonomy of unmanned ground platforms applied to Robotics for Risky Interventions and Environmental Surveillance**  *Authors: Mikołaj ZARZYCKI1, Magdalena DUDEK2, Andrzej MASŁOWSKI1*  1 Łukasiewicz Research Network – Industrial Research Institute for Automation and Measurements PIAP, Al. Jerozolimskie 202, 02-486 Warszawa, Poland  2 AGH University of Science and Technology, Faculty of Energy and Fuels,  al. A. Mickiewicza 30, 30-059 Kraków, Poland  Corresponding author: [mikolaj.zarzycki@piap.lukasiewicz.gov.pl](mailto:mikolaj.zarzycki@piap.lukasiewicz.gov.pl) |
| 7:50 AM | **An Implementation of Low-Cost System-on-Chip with Neural Network**  **for Surveillance Cameras**  Xiaokun Yang, Assistant Professor, Engineering Department, University of Houston – Clear Lake , USA [YangXia@UHCL.edu](mailto:YangXia@UHCL.edu) |
|  | **Break** |
| 8:20 AM | **iGrab Duo: Novel 3D printed Soft Orthotic Hand Triggered by EMG signals**  Authors: Irfan Zobayed1,2, Drew Miles1, and Yonas Tadesse1,2,3,4  1Humanoid, Bio-robotics and Smart Systems (HBS) Lab, Mechanical Engineering Department, The University of Texas at Dallas  2Biomedical Engineering Department, The University of Texas at Dallas  3Electrical and Computer Engineering Department, The University of Texas at Dallas  4Alan G. MacDiarmid Nanotech Institute, The University of Texas at Dallas  [Irfan.Zobayed@utdallas.edu](mailto:Irfan.Zobayed@utdallas.edu) |
| 8:35 AM | **UAV Assisted Pathfinding in Flooding Area**  P. Fadimiroye, J. Lu and D. McDowell,  University of Houston-Clear Lake, USA  [FadimiroyeP9469@UHCL.edu](mailto:FadimiroyeP9469@UHCL.edu) |
| 8:50 AM | **Kinematic Redundancy Resolution for Robots used in Disaster Search/Rescue and Medical Operation**  Khoa Le, Luong Nguyen, Thomas Harman, Computer Engineering Department,University of Houston Clear Lake, USA  [khoale0316@gmail.com](mailto:khoale0316@gmail.com) |
| 9.05 AM | **A simple NBV selection method for smoother exploration of unknown environments**  Adonisz Dimitriu Department of Control Engineering Budapest University of Technology and Economics Budapest, Hungary d.adonisz96@gmail.com  Istvan Harmati Department of Control Engineering Budapest University of Technology and Economics Budapest, Hungary harmati@iit.bme.hu |
| 9:20AM | **Micro robot for intravascular therapy**”  Divyang Patel, Anand, Gujarat, INDIA  [kachhiadivyang@gmail.com](mailto:kachhiadivyang@gmail.com) |
| 9:35 AM | **Oil Exploration – Role of numerical simulation and inversion**  Dr. Gulamabbas A. Merchant, Electra-Magnetic Research and Development  [gabbas@flash.net](mailto:gabbas@flash.net) |
| 9:50 AM | **Performance Measurement of Open Shortest Path First Protocol with Failure Recovery in IP Networks**  Kehinde Gilbert, Sarhan M. Musa, Electrical and Computer Engineering Department  Praire View A&M University Prairie View, Texas  kkpokpogbe@pvamu.edu; [smmusa@pvamu.edu](mailto:smmusa@pvamu.edu) |
| 10:10 AM | **Concluding Remarks** |

**Updates of the program will be posted on**[**www.ISMCR.ORG**](http://www.ismcr.org/)**. Registration is FREE and is available at**

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