

# 2022 Workshop on Benchmarking Cyber-Physical Systems and Internet of Things (CPS-IoTBench) **CPS-IoTBench 2022**

## Table of Contents

Welcome Message from the CPS-IoTBench 2022 Organizers .....	vii
Committee Members .....	ix

### Session 1

Regression Model Trees: Compact Energy Models for Complex IoT Devices .....	1
<i>Daniel Friesel (Universität Osnabrück, Germany) and Olaf Spinczyk (Universität Osnabrück, Germany)</i>	
Benchmarking Audio-Based Deep Learning Models for Detection and Identification of Unmanned Aerial Vehicles .....	7
<i>Sai Srinadhu Katta (Technology Innovation Institute, U.A.E), Sivaprasad Nandyala (Technology Innovation Institute, U.A.E), Eduardo Kugler Viegas (Technology Innovation Institute, U.A.E), and Abdelrahman AlMahmoud (Technology Innovation Institute, U.A.E)</i>	
Benchmarking Performance of Ethereum Blockchain on Resource Constrained Devices .....	12
<i>Suhail Al Marzouqi (Secure Systems Research Center (SSRC), Technology Innovation Institute (TII), United Arab Emirates), Michael Baddeley (Secure Systems Research Center (SSRC), Technology Innovation Institute (TII), United Arab Emirates), and Martin Andreoni Lopez (Secure Systems Research Center (SSRC), Technology Innovation Institute (TII), United Arab Emirates)</i>	

### Session 2

Reproducing Key Results from "Restructuring Endpoint Congestion Control" .....	17
<i>Tushar Dhoot (Stanford University, USA) and Joe Zhang (Stanford University, USA)</i>	

Signal Loss in Body Coupled Communication: Guide for Accurate Measurements .....	22
<i>Juris Ormanis (Institute of Electronics and Computer Science, Latvia), Vladislavs Medvedevs (Institute of Electronics and Computer Science, Latvia), Valters Abolins (Institute of Electronics and Computer Science, Latvia), Gatis Gaigals (Institute of Electronics and Computer Science, Latvia), and Atis Elsts (Institute of Electronics and Computer Science, Latvia)</i>	
On the Performance of IEEE 802.15.4z-Compliant Ultra-Wideband Devices .....	28
<i>Michael Stocker (Graz University of Technology, Austria), Hannah Brunner (Graz University of Technology, Austria), Maximilian Schuh (Graz University of Technology, Austria), Carlo Alberto Boano (Graz University of Technology, Austria), and Kay Römer (Graz University of Technology, Austria)</i>	
First Steps in Benchmarking the Performance of Heterogeneous Ultra-Wideband Platforms .....	34
<i>Maximilian Schuh (Graz University of Technology, Austria), Hannah Brunner (Graz University of Technology, Austria), Michael Stocker (Graz University of Technology, Austria), Markus Schuß (Graz University of Technology, Austria), Carlo Alberto Boano (Graz University of Technology, Austria), and Kay Römer (Graz University of Technology, Austria)</i>	
<b>Author Index .....</b>	<b>41</b>