

# Technical Program

The 4<sup>th</sup> CPSSI International Symposium on Real-Time and Embedded Systems and Technologies (RTEST'2022)

May 30-31, 2022, Iran University of Science and Technology (IUST), Tehran, Iran.

(URL: <https://rtest2022.iust.ac.ir/>)

## Workshop#1 (Saturday, May 28, 2022)

Time (IRST)	Session/Title	Place
10:30-12:00 13:30-15:00	Presenter: <b>Dr. Amir Mahdi Hosseini Monazzah</b> Title: <b>Embedded Systems: The Future Computation Systems</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest2022-workshop1">https://meetingvc.iust.ac.ir/rtest2022-workshop1</a> )

## Workshop#2 (Sunday, May 29, 2022)

Time (IRST)	Session/Title	Place
10:30-12:00 13:30-15:00	Presenter: <b>Dr. Hamed Sepehrzadeh</b> Title: <b>Cyber-Physical Security versus Cyber Security</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest2022-workshop2">https://meetingvc.iust.ac.ir/rtest2022-workshop2</a> )

## Technical Program - First Day (Monday, May 30, 2022)

Time (IRST)	Session/Title	Place
09:00-09:45	<b>Opening Session (Physical)</b>	<b>Room 201, IUST-CE &amp; Online</b>
09:45-10:00	Coffee Break	( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
10:00-11:00	Keynote Speech 1: <b>Professor Maryline Chetto</b> Title: <b>Real-time scheduling issues in sensors with energy neutral constraints</b> Session Chair: <b>Professor Geert Deconinck</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
11:00-12:00	Keynote Speech 2: <b>Professor Marjan Sirjani</b> Title: <b>Analysis of Timing Properties in Networked Systems</b> Session Chair: <b>Professor Mohsen Sharifi</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
12:00-14:00	Lunch Break	
14:00-17:00	<b>1<sup>st</sup> Session – Chairs: Dr. Mehdi Kargahi and Dr. Hosseini Monazzah</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
	<b>Paper#1:</b> Reinder J. Bril. <i>On system models and schedulability analysis for basic single-rate cyclic executives</i>	
	<b>Paper#2:</b> Farimah Ramezan Poursafaei, Sepideh Safari, Mohsen Ansari, Amir Yeganeh-Khaksar, Mohammad Salehi and Alireza Ejlali. <i>Energy- and Reliability-Aware Task Replication in Safety-Critical Embedded Systems</i>	
	<b>Paper#3:</b> Farzam Tajdari, Hasan Ramezani, Shadi Paydarfar, Ali Lashgari and Shakib Maghrebi. <i>Optimal flow metering and lane-changing control with ramp-metering saturation</i>	
	<b>Paper#4:</b> Mohammad Amin Moloudi, Amin Foshati, Hossein Kalantari and Alireza Ejlali. <i>A Combination of FMEA and Digital Twinning for Rapid, Accurate, and Online Diagnosis in Vehicles Using COTS Embedded Computing Devices</i>	
	<b>Paper#5:</b> Mohammad Jalili and Fathiyeh Faghieh. <i>Static/Dynamic Analysis of Android Applications to Improve Energy-Efficiency</i>	
	<b>Paper#6:</b> Hussien Al-Haj Ahmad and Yasser Sedaghat. <i>GCFI: A High Accurate Compiler-based Fault Injection for Transient Hardware Faults</i>	

**Technical Program - Second Day (Tuesday, May 31, 2022)**

Time (IRST)	Session/Title	Place
90:00-10:00	Keynote Speech 3: <b>Professor Mohammad Reza Mousavi</b> Title: <b>Formal Analysis of Dynamic Updates in Software Defined Networks</b> Session Chair: <b>Professor Ali Movaghar</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
10:00-12:00	<b>2<sup>nd</sup> Session – Chairs: Dr. Zeinab Movahedi and Dr. Fatemeh Ghassemi</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
	<b>Paper#7:</b> Sahar Rezaghali Lalani, Bardia Safaei, Amir Mahdi Hosseini Monazzah and Alireza Ejlali. <i>PEARL: Power and Delay-Aware Learning-based Routing Policy for IoT Applications</i>	
	<b>Paper#8:</b> Amin Norollah, Zahra Kazemi, Danesh Derafshi, Hakem Beitollahi and Mahdi Fazeli. <i>Protecting Security-Critical Real-Time Systems against Fault Attacks in Many-Core Platforms</i>	
	<b>Paper#9:</b> Melika Dastranj, Mehran Alidoost Nia and Mehdi Kargahi. <i>Deploying Reinforcement Learning for Efficient Runtime Decision-Making in Autonomous Systems</i>	
	<b>Paper#10:</b> Rojin Naseri, Ali Naghsh Asadi and Mohammad Abdollahi Azgomi. <i>A Model for Power-Performance Optimization in Fog-Cloud Environment by Task Off-Loading of IoT Applications</i>	
12:00-14:00	Lunch Break	
14:00-16:00	<b>3<sup>rd</sup> Session –Chairs: Dr. Hamid Reza Zarandi and Dr. Hakem Beitollahi</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
	<b>Paper#11:</b> Hassan Motallebi. <i>Conflict Resolution and Fluidization in Cyber-Physical Systems</i>	
	<b>Paper#12:</b> Ch. Naga Sai Kalyan, Manikyala Dilip Kumar, B. Srikanth Goud, Hossein Shahinzadeh, Ch. Rami Reddy and Malligunta Kiran Kumar. <i>Frequency Regulation of Multi Area Hybrid Source Power System with Energy Storage Devices</i>	
	<b>Paper#13:</b> Hamed Sepehrzadeh. <i>Security Evaluation of Cyber-Physical Systems with Redundant Components</i>	
	<b>Paper#14:</b> Ferdous Sharifi, Shaahin Hessabi and Ali Rasaii. <i>The Effect of Fog Offloading on the Energy Consumption of Computational Nodes</i>	
16:00-18:00	<b>4<sup>th</sup> Session – Chairs: Dr. Bardia Safaee and Dr. Abdollahi Azgomi</b>	Online ( <a href="https://meetingvc.iust.ac.ir/rtest/">https://meetingvc.iust.ac.ir/rtest/</a> )
	<b>Paper#15:</b> Amirhosein Imani, Mohsen Eslami and Javad Haghighat. <i>Coverage and Energy Efficiency Analysis of Wireless Sensor Networks for Internet of Things</i>	
	<b>Paper#16:</b> Hussien Al-Haj Ahmad and Yasser Sedaghat. <i>Software-based Control-Flow Error Detection with Hardware Performance Counters in ARM Processors</i>	
	<b>Paper#17:</b> Cutifah Safitri. <i>Threats, Challenges and Requirements for Security in Vehicular Ad Hoc Network</i>	
	<b>Closing: Best Paper Announcement</b>	