

# EAI SIMUtools 2023 Conference: Program

December 14-15, 2023

Escuela Técnica Superior de Ingeniería Informática, Universidad de Sevilla

Time for each presentation slot:

25 min: 15 min presentation, 5 min Questions and Answers, 5 min extra time and presenter change

DATE	TIME	ACTIVITY	AUTHORS	ONSITE/ ONLINE
Thursday, December 14, 2023				
	8:30 - 9:00	Registration		
	9:00 - 9:20	Opening Ceremony (Salón de Grados)		
	9:20 - 10:30	Keynote Speech 1: Why Sim-Learnheuristics? Solving Optimization Problems under Stochastic and Dynamic Scenarios	Angel A. Juan Full Professor, Data Science and Operations Research, Universitat Politècnica de València (UPV, Spain)	Site
	10:30 - 11:00	Coffee Break (Cafetería)		
		Presentations. Chair: José Luis Guisado Lizar (University of Seville, Spain)		
	11:00 - 11:25	Generative AI with Modeling and Simulation of Activity and Flow-based Diagrams	Alshareef, Abdurrahman (King Saud University); Keller, Nicholas (RTSync Corp., USA); Carbo, Priscilla (RTSync Corp., USA); Zeigler, Bernard P. (RTSync Corp., USA)	Site

	11:25 - 11:50	Wildfire Risk Mapping based on Mutlti-Source Data and Machine Learning	Comiti, Ghinevra (Universita di Corsica Pasquale Paoli); Bisgambiglia, Paul-Antoine (Universita di Corsica Pasquale Paoli); Bisgambiglia, Paul (Universita di Corsica Pasquale Paoli)	Site
	11:50 - 12:15	Spatio-temporal Speed Metrics for Traffic State Estimation on complex Urban Roads	Schweppenhäuser, Moritz (Fraunhofer FOKUS); Schrab, Karl (Technische Universität Berlin); Protzmann, Robert (Fraunhofer FOKUS); Radusch, Ilja (Technische Universität Berlin)	Online
	12:15 - 12:40	ECG pre-processing and feature extraction tool for intelligent simulation systems	Domínguez-Morales, Manuel (Universidad de Sevilla); Muñoz-Macho, Adolfo (Performance and Medical Department at RCD Mallorca SAD); Sevillano, Jose Luis (Universidad de Sevilla)	Site
	12:40 - 13:05	Replacing Sugarscape: A Comprehensive, Expansive, and Transparent Reimplementation	Kremer-Herman, Nathaniel (Seattle University); Gupta, Ankur (Butler University)	Site
	13:05 - 14:30	<b>Lunch (Cafetería)</b>		
	14:30 - 15:40	<b>Keynote Speech 2: Modeling and Simulation of Cellular Networks: formalizing the models</b>	<b>Gabriel Wainer</b> Professor at Carleton University Department of Systems and Computer Engineering, Ottawa, Canada	Site
		<b>Presentations. Chair: José Vicente Berna Martínez (University of Alicante, Spain)</b>		

	15:40 - 16:05	Integrating Efficient Routes with Station Monitoring for Electric Vehicles in Urban Environments: Simulation and Analysis	Ragel Díaz-Jara, David (University of Seville); Guisado-Lizar, Jose-Luis (University of Seville); Díaz-del-Rio, Fernando (University of Seville); Morón Fernández, María José (University of Seville); Cagigas-Muñiz, Daniel (University of Seville); Cascado-Caballero, Daniel (University of Seville); Jimenez-Moreno, Gabriel (University of Seville)	<b>Site</b>
	16:05 - 16:30	Comparing the Efficiency of Traffic Simulations using Cellular Automata	DIAZ-DEL-RIO, FERNANDO (University of Seville); Ragel Díaz-Jara, David (University of Seville); Moron, Maria J. (University of Malaga); Cagigas-Muñiz, Daniel (Universidad de Sevilla); Cascado Caballero, Daniel (Universidad deSevilla); Guisado-Lizar, Jose-Luis (University of Seville); Jimenez-Moreno, Gabriel (Universidad Sevilla)	<b>Site</b>
	16:30 - 17:00	<b>Coffee Break (Cafetería)</b>		
		<b>Presentations. Chair: David Orellana Martín (University of Seville, Spain)</b>		

	17:00 - 17:25	Adaptive sharing of IoT resources through SDN-based microsegmentation of services using Mininet	Martínez, Angely (Universitat Politècnica de València); Padron, Jose D. (Universitat Politècnica de València); Zambrano-Martinez, Jorge Luis (University of Azuay); Calafate, Carlos T. (Universitat Politècnica de València)	<b>Site</b>
	17:25 - 17:50	Multi-Agent Simulation for Scheduling and Path Planning of Autonomous Intelligent Vehicles	SANOGO, Kader (CESI LINEACT); SAHNOUN, M'hammed (CESI LINEACT); MEKHALEF BENHAFSSA, Abdelkader (CESI LINEACT)	<b>Site</b>
	18:15	Bus to the city centre (Departure from the front of the ETSII main entrance)		
	19:00 - 20:30	<b>Guided walk through Seville city centre</b>		
	20:30 - 22:30	<b>Gala Dinner + Flamenco music&amp;dance show</b> <b>(<a href="https://tablaolarenal.com/en/">https://tablaolarenal.com/en/</a>)</b>		
<b>Friday, December 15, 2023</b>				
		<b>Presentations. Chair: Gabriel A. Wainer (Carleton University, Canada)</b>		

	9:00 - 9:25	UAV-Assisted Wireless Communications: An Experimental Analysis of A2G and G2A Channels	Shafafi, Kamran (INESC TEC and Faculdade de Engenharia, Universidade do Porto); Almeida, Eduardo Nuno (INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal); coelho, andre filipe (INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal); Fontes, Helder (INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal); Ricardo, manuel (INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal); Campos, Rui (INESC TEC and Faculdade de Engenharia, Universidade do Porto, Portugal)	Online
	9:25 - 9:50	Trajectory-Aware Rate Adaptation for Flying Networks	Queiros, Ruben (FEUP/INESC TEC); Ruela, Jose (INESC TEC); Fontes, Helder (INESC TEC); Campos, Rui (FEUP/INESC TEC)	Online
	9:50 - 10:15	Rate Adaptation Aware Positioning for Flying Gateways using Reinforcement Learning	Pantaleao, Gabriella (FEUP/INESC TEC); Queiros, Ruben (FEUP/INESC TEC); Fontes, Helder (FEUP/INESC TEC); Campos, Rui (FEUP/INESC TEC)	Online
	10:15 - 10:40	RateRL: A Framework for Developing RL-Based Rate Adaptation Algorithms in ns-3	Queiros, Ruben (INESC TEC); Ferreira, Luís (FEUP/INESC TEC); Fontes, Helder (INESC TEC); Campos, Rui (FEUP/INESC TEC)	Online
	10:40 - 11:10	<b>Coffee Break (Cafetería)</b>		

		<b>Presentations. Chair: Luis Valencia Cabrera (University of Seville, Spain)</b>		
	11:10 - 11:35	On the Analysis of Computational Delays in Reinforcement Learning-based Rate Adaptation Algorithms	Trancoso, Ricardo (INESC TEC); Pinto, João (Faculdade de Engenharia da Universidade do Porto); Queiros, Ruben (INESC TEC); Fontes, Helder (INESC TEC); Campos, Rui (INESC TEC)	Online
	11:35 - 12:00	An Intelligent Ranking Evaluation Method of Simulation Models Based on Graph Neural Network	Yang, Fan (Harbin Institute of Technology); Li, Wei (Harbin Institute of Technology); Ma, Ping (Harbin Institute of Technology); Yang, Ming (Harbin Institute of Technology)	Online
	12:00 - 12:25	A DEVS-based methodology for simulation and model-driven development of IoT	Alavi Fazel, Iman (Carleton University); Wainer, Gabriel A. (Carleton University)	Site
	12:25 - 12:50	Performance Evaluation of a Legacy Real-Time System: An Improved RAST Approach	Tomak, Juri (University of Muenster); Liermann, Adrian (University of Muenster); Gorlatch, Sergei (University of Muenster)	Online
	12:50 - 14:30	<b>Lunch</b>		
		<b>Presentations. Chair: José Luis Sevillano Ramos (University of Seville, Spain)</b>		
	14:30 - 14:55	KNXsim: Simulator tool for KNX home automation training by means of group addresses	Gómez-Pulido, Juan A. (Universidad de Extremadura)	Online

	14:55 - 15:20	Development of a 3D visualization interface for virtualized UAVs	Rivière, Chloé (Reunion Island and Indian Ocean Engineering School (ESIROI)); Wubben, Jamie (Universitat Politècnica de València); T. Calafate, Carlos T. (Universitat Politècnica de València); Razafindralambo, Tahiry (Université de La Réunion)	Site
	15:20 - 15:45	OTOVIRT: An image-guided workflow for individualized surgical planning and multiphysics simulation in cochlear implant patients	Lazo-Maestre, Manuel (Hospital Universitario Virgen Macarena); Jorge, Mansilla-Gil (Hospital Universitario Virgen Macarena); Callejón, Amparo (Universidad de Sevilla); Alonso-González, Cristina (Hospital Universitario Virgen Macarena); Ropero-Romero, Francisco (Hospital Universitario Virgen Macarena); Ambrosiani-Fernández, Jesús (Universidad de Sevilla); Reina-Tosina, Javier (University of Seville); Sánchez-Gómez, Serafín (Hospital Universitario Virgen Macarena)	Site
	15:45 - 16:15	<b>Coffee Break (Cafetería)</b>		
		<b>Presentations. Chair: Agustín Riscos Núñez (University of Seville, Spain)</b>		
	16:40 - 17:05	Test-Driven Simulation of Robots Controlled by Enzymatic Numerical P Systems Models	Bobe, Radu (University of Bucharest); Gheorghe, Marian (University of Bradford); Ipate, Florentin (University of Bucharest); Niculescu, Ionut Mihai (University of Bucharest)	Online

	17:05 - 17:30	PySPN: An Extendable Python Library for Modeling & Simulation of Stochastic Petri Nets	Friederich, Jonas (University of Southern Denmark); Lazarova-Molnar, Sanja (Karlsruhe Institute of Technology)	Online
	17:30 - 17:55	Simulation of drinking water infrastructures through artificial intelligence-based modelling for sustainability improvement	Calatayud Asensi, Carlos (Aguas de Valencia S.A.); Berna Martinez, Jose Vicente (University of Alicante); Arnau Muñoz, Lucia (University of Alicante); Macián Cervera, Vicente Javier (Aguas de Valencia S.A.); Maciá Pérez, Francisco (University of Alicante)	Site
	17:55 - 18:15	<b>Closing Ceremony + Best Paper Award</b>		