

2024 32nd International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises (WETICE 2024)

**Reggio Emilia, Italy
26-28 June 2024**



**IEEE Catalog Number: CFP24051-POD
ISBN: 979-8-3315-0588-2**

**Copyright © 2024 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP24051-POD
ISBN (Print-On-Demand):	979-8-3315-0588-2
ISBN (Online):	979-8-3315-0587-5

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

2024 32nd International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises (WETICE) **WETICE 2024**

Table of Contents

Message from General Chairs	ix
Message from Program Chairs	x
Organizing Committee	xi
Program Committee	xii
Reviewers	xiv

Session 1

Smart IoT System for Real-Time Worker Safety Monitoring in Dead Zones	1
<i>Matteo Gallina (University of Catania, Italy), Marco Recca (University of Catania, Italy), Miriana Russo (University of Catania, Italy), Corrado Santoro (University of Catania, Italy), Federico Fausto Santoro (University of Catania, Italy), and Alessio Tudisco (University of Catania, Italy)</i>	
A Method for 3D Indoor Positioning Based on the Honey Badger Algorithm	7
<i>Simone Dallospedale (Università degli Studi di Modena e Reggio Emilia, Italy), Mattia Alex Leoni (Università degli Studi di Modena e Reggio Emilia, Italy), Stefania Monica (Università degli Studi di Modena e Reggio Emilia, Italy), and Federico Bergenti (Università degli Studi di Parma, Italy)</i>	
An Approach to Cooperative Human-Robot Teaming in Smart Agriculture	13
<i>Sara Comai (Politecnico di Milano, Italy), Mariagrazia Fugini (Politecnico di Milano, Italy), Sergio Gusmeroli (Politecnico di Milano, Italy), and Fabio Salice (Politecnico di Milano, Italy)</i>	

Session 2

Scalable Data Notarization Leveraging Hybrid DLTs	20
<i>Domenico Tortola (University of Pisa, Italy), Claudio Felicioli (Traent, Italy), Andrea Canciani (Geckosoft, Italy), and Fabio Severino (Traent, Italy)</i>	

Leveraging Blockchains for Decentralized Health Care and Emergency Services Management	26
<i>Andrea Calvoagna (University of Catania, Italy), Selvakumar Thakshnamurthy (University of Catania, Italy), and Emiliano Tramontana (University of Catania, Italy)</i>	

Towards Asynchronous Conflict Resolution through the Concurrency Patterns Abstraction in DAG-Based Blockchains	32
<i>Fabiola Marcos Solis (Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico), Saul Eduardo Pomares Hernandez (Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico), José Roberto Pérez Cruz (Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico), and Lil María Rodríguez Henríquez (Instituto Nacional de Astrofísica, Óptica y Electrónica, Mexico)</i>	

Session 3

Implementation of the Digital Twin in Water 4.0	38
<i>Giacomo Cabri (UNIMORE, Italia), Alireza Rahimi (UNIMORE, Italia), and Angelo Ferrando (UNIMORE, Italia)</i>	

Towards a Network of Co-Working Spaces for Social Innovation in Mountain Areas	44
<i>Marco Alderighi (Università della Valle d'Aosta, Italy), Cristina Baroglio (Università degli Studi di Torino, Italy), Mario Chiesa (LINKS Foundation, Italy), Tiziana Ciano (Università della Valle d'Aosta, Italy), Christophe Feder (Università della Valle d'Aosta, Italy), Valeria Figini (LINKS Foundation, Italy), Elisa Marengo (Università degli Studi di Torino, Italy), and Stefano Tedeschi (Università della Valle d'Aosta, Italy)</i>	

Detecting Social Interaction	50
<i>Andrea Tocchetti (Politecnico di Milano, Italy), Stefano Brusadelli (Politecnico di Milano, Italy), and Mariagrazia Fugini (Politecnico di Milano, Italy)</i>	

Session 4

Integrating Self Sovereign Identity in XACML: the MERGE Approach	56
<i>Andrea De Salve (National Research Council, Italy), Damiano Di Francesco Maesa (University of Pisa, Italy), Paolo Mori (National Research Council, Italy), Giulio Piva (University of Pisa, Italy), and Laura Ricci (University of Pisa, Italy)</i>	

RVElastic: A Runtime Verification Framework for Microservice Systems	62
<i>Stefano Murino (Doxee SPA, Italy), Angelo Ferrando (University of Modena and Reggio Emilia, Italy), and Giacomo Cabri (University of Modena and Reggio Emilia, Italy)</i>	

Integrating Business Process Context into Solidity-to-CPN Formal Verification	68
<i>Ikram Garfatta (Télécom SudParis, France), Kaïs Klai (University Sorbonne Paris North, France), and Walid Gaaloul (Télécom SudParis, France)</i>	

Session 5

Short-Term Forecasting of Energy Consumption and Production in Local Energy Communities	74
<i>Natalia Selini Hadjidimitriou (University of Modena and Reggio Emilia, Italy), Marco Mamei (University of Modena and Reggio Emilia, Italy), Marco Lippi (University of Florence, Italy), Raffaele Nastro (Geco Renew Group, Italy), and Thorsten Koch (Zuse Institute Berlin, Germany)</i>	
Auto-Encoding Multispectral Data for Leaf Nitrogen Content Estimation	80
<i>Bamory Ahmed Toru Koné (University of Sfax, Tunisia), Rima Grati (Zayed University, United Arab Emirates), Bassem Bouaziz (University of Sfax, Tunisia), and Khouloud Boukadi (University of Sfax, Tunisia)</i>	
RADIANCE: A CASE Tool for Green Software Design	86
<i>Jorge Andrés Larracochea (Université de Pau et des Pays de L'Adour, France), Sergio Ilarri (Universidad de Zaragoza, Spain), and Philippe Roose (Université de Pau et des Pays de L'Adour, France)</i>	

Session 6

Towards a Knowledge Diversity Notion to Identify Intrusions in Industrial Contexts	92
<i>Fabio Sartori (University of Milano-Bicocca), Marco Savi (University of Milano-Bicocca), Gaia Tarrini (University of Milano-Bicocca), and Jacopo Talpini (University of Milano-Bicocca)</i>	
Dimensional Emotion Annotation for Spontaneous Tunisian Dialect Speech	98
<i>Latifa Iben Nasr (MIRACL Laboratory-University, Tunisia), Abir Masmoudi (MIRACL Laboratory-University, Tunisia), and Lamia Hadrich Belguith (MIRACL Laboratory-University, Tunisia)</i>	

Session 7

Digital Twin Driven Collaboration in Industry 5.0	104
<i>Matteo Martinelli (University of Modena and Reggio Emilia, Italy), Marcello Pietri (University of Modena and Reggio Emilia, Italy), Enrico Rossini (University of Modena and Reggio Emilia, Italy), Marco Picone (University of Modena and Reggio Emilia, Italy), and Marco Mamei (University of Modena and Reggio Emilia, Italy)</i>	
Topic Modeling Influence in Sentiment Analysis from User-Generated Product Reviews	110
<i>Patrick A. M. de Araújo (UNICAMP, Brazil), Seyed J. Haddadi (UNICAMP, Brazil), Fillipe dos S. Silva (UNICAMP, Brazil), Marcelo da S. Reis (UNICAMP, Brazil), and Julio C. Dos Reis (UNICAMP, Brazil)</i>	
An SLA-Driven, AI-Based QoS Manager for Controlling Application Performance on Edge Cloud Continuum	116
<i>Antonella Di Stefano (University of Catania, Italy), Massimo Gollo (University of Catania, Italy), and Giovanni Morana (University of Catania, Italy)</i>	

Session 8

Preventing Epilepsy: A Case Study into Radiomics and Pre-Processing Efficacy	122
<i>Giulia Varriano (University of Molise, Italy), Luigi Pavone (IRCCS Neuromed, Italy), Simona Correra (University of Molise, Italy), Giancarlo Di Gennaro (IRCCS Neuromed, Italy), Marcello Bartolo (IRCCS Neuromed, Italy), Ferdinando Caranci (University of Campania "L. Vanvitelli", Italy), Antonella Santone (University of Molise, Italy), and Luca Brunese (University of Molise, Italy)</i>	
Identifying Ocular Diseases through Image Processing: Pattern Matching on Single Fundus Images	128
<i>Simona Correra (University of Molise, Italy), Giulia Varriano (University of Molise, Italy), Vittoria Nardone (University of Molise, Italy), and Antonella Santone (University of Molise, Italy)</i>	
Improving Medication Identification Accuracy and Regulatory Compliance through NLP and Ontologies: An Analysis of Otorhinolaryngology Prescriptions	134
<i>Nelson Miranda (University of São Paulo, Brazil), Allan Ferreira (São Paulo State University, Brazil), Reinaldo Peres (São Paulo State University, Brazil), Leonardo Botega (São Paulo State University, Brazil), and Dilvan A. Moreira (University of São Paulo, Brazil)</i>	

Session 9

On the Adoption of Counterexample for Classification Task Explainability	140
<i>Fabio Martinelli (CNR, Italy), Francesco Mercaldo (University of Molise, Italy), and Antonella Santone (University of Molise, Italy)</i>	
Automatic Land Use and Land Cover Classification by Means of Characterising Colours	146
<i>Daniele Marletta (University of Catania, Italy), Alessandro Midolo (University of Catania, Italy), and Emiliano Tramontana (University of Catania, Italy)</i>	
Author Index	153