TACC 2023

3rd Tunisian-Algerian Joint Conference on Applied Computing

December 6 – 8, 2023
Sousse, Tunisia
Preface

The Tunisian Algerian Conference on Applied Computing (TACC 2023) is a platform for keeping up with advances and changes to a consistently evolving field. Leading researchers and industry experts from Tunisia and Algeria will present the latest studies through papers and oral presentations. This conference edition is dedicated to the study of applied research of real-world problems. It aims to address, both theoretical and applied computer science issues. The TACC 2023 contributions are devoted to the following fields, but is not limited to:

- Artificial Intelligence and Agents
- Distributed Systems
- Information Systems
- Software Engineering
- Software Architecture
- System and Software Security
- Algorithms, automata, and complexity
- Logic, semantics, and theory of programming
- Static analysis, verification, and testing
- Applications of IOT, AI, Cloud and BIG Data for environmental sustainability

In response to the call for papers, 44 papers were submitted. Each paper was reviewed by at least three reviewers and evaluated based on the originality, quality, and relevance to the conference topics. The Program Committee selected 18 papers as full papers for publication in the proceedings and presentation at the Conference. The program was completed with excellent invited talks given by Khalil Drira (Research Director, LAAS-CNRS, Toulouse, France) and Chouki Tibermachine (Associate Professor, Montpellier University, France).

We would like to express our appreciation to the authors of the submitted papers, the Program Committee members, and the external reviewers. We owe special thanks to the Organizing Committee members for the hard work they did locally in Sousse.

November 2023

Ismael Bouassida Rodriguez,
Slim Kallel,
Zakaria Benzadri,
Faiza Belala,
Ahmed Kacem Hadj
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- Slim Kallel, University of Sfax, Tunisia
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- Aicha Choutri, University of Constantine2, Algeria
Accepted papers

Locating Loop Errors in Programs: A Scalable and Expressive Approach using LocFaults
Mohammed Bekkouche

Runtime verification of distributed algorithms using high-level Petri nets
Fateh Latreche and Hichem Talbi

Vers l’amélioration des caractéristiques des réseaux de neurones profonds : une approche de méta-modélisation
Aïcha Choutri, Angham Boukhari, Faiza Belala and Ahmed Hadj Kacem

Towards an AI-Based Approach for Adaptive Emission Control and Sensor Diagnostics: A gasoline engine case study
Latifa Heroual, Mohamed Lamine Berkane and Nourelhouda Bouzerzour

Enhancing Container Runtime Security: A Case Study in Threat Detection
Amina Eldjou, Mohcene Soltane, Mohamed Elhadi Amoura, Meriem Belguidoum, Samir Benacer and Ilham Kitouni

Toward Reinforcement Learning-based Framework for Workflow Migration: Position Paper
Nour El Houda Boubaker, Karim Zarour, Nawal Guermouche and Djamel Benmerzoug

MCSR: A graph transformation based approach for Minimal and Compact Set Representation of Causal Dependencies in Distributed Systems
Houda Khliif, Hatem Hadj Kacem and Saúl E. Pomares

Optimizing network slice placement using Deep Reinforcement Learning (DRL) on a real platform operated by Open Source MANO (OSM)
Alexandre Sabbadin, Abdel Kader Chabi Sika Boni, Hassan Hassan and Khalil Drira

Duplication-Driven Distributional Topic Modeling: A Catalyst for Strengthened Classification and Semantic Graphs
Amani Mechergui, Wahiba Ben Abdessalem Karaa and Sami Zghal

Enhancing Self-Adaptive Cyber-Physical Systems using Federated Machine Learning
Nabila Azeri, Ouided Hioual and Ouassila Hioual

Reviewing Recent Literature on IoT-Based System-of-Systems: A Bibliometric Analysis
Aymen Abdelmoumen, Zakaria Benzadri and Ismael Bouassida Rodriguez.
Misebhavior detection systems in IoT environment: A survey
   Rahma Trabelsi, Ghofrane Fersi and Mohamed Jmaiel

Modélation et analyse des systèmes cyber-physiques cas du système de surveillance continue du glucose
   Feryel Benina, Nadira Benlahrache, Faiza Belala and Ahmed Hadj Kacem

A survey on event log extraction from blockchain
   Ahlem Makni, Rawya Mars, Saoussen Cheikhrouhou, Slim Kallel and Mohamed Sellami

MW4BPM: A middleware for Blockchain-Based Business Process Monitoring
   Ryhem Essid, Wael Sellami and Hatem Hadj Kacem

Improving the supply chain management via Blockchain: an olive oil case study
   Mariam Lahami and Faten Chabaane

A review of usable EEG-based solutions for epileptic seizure prediction
   Abir Affes, Afef Mdhaffar, Mohamed Jmaiel and Bernd Freisleben

Towards Bidirectional Conversion between Arabic Sign Language and Speech/Text
   Souha Ben Hamouda, Wafaa Gabsi and Bechir Zalila