Abdelhamid MEHRI
Constantine 2 University,
LIRE LABORATORY



2023



**RIF'23** 

# **PROCEEDINGS**

MARCH 9, 2023 CONSTANTINE, ALGERIA

Women in Emerging Technologies

THE 12TH SEMINARY OF COMPUTER SCIENCE RESEARCH AT FEMININE













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### **Preface**

Since 2012, RIF (Recherche en Informatique au Féminin) has been organized annually by the women's research team at LIRE Laboratory (Laboratoire d'Informatique REpartie) within Constantine 2-Abdelhamid Mehri University in Algeria. This scientific event serves as a platform for researchers to showcase their research findings across various topics and engage in productive discussions regarding both theoretical and practical outcomes.

Women have always played a significant role in shaping our world and their influence in emerging technologies is no exception. Nowadays, women are breaking barriers, defying stereotypes, and making their mark in several fields such as artificial intelligence, blockchain, robotics, cybersecurity, and data science, among others, and driving positive change across industries. Women not only excel as technology users but also as inventors, entrepreneurs, researchers, and thought leaders, driving forward innovative solutions.

The edition of this year "RIF 2023" is dedicated to recognize and celebrate the contributions of women in the field of emerging technologies. RIF had six main topic areas, covering different aspects including:

- Modern and Emerging Systems (Internet of Things, Fog Systems, Cloud Systems)
- Novel Methods and Algorithms in Artificial Intelligence (Machine Learning, Deep Learning and Data Sciences)
- Big data Analytics (Natural Language Processing, Information Research, Sentiment
- Analysis)
- Parallel and Distributed Computing
- Cyber-Physical Systems (Industry 4.0, Blockchains, Robots, Augmented Reality)
- Business Intelligence (Big data integration, IT policy and Business Management, Business Analytics)

RIF 2023 received 18 paper submissions. From these, 7 papers were published and presented as regular papers, 3 were accepted as short papers. These papers were selected based on the originality, quality, and relevance to the topics. Each submission was reviewed, at least, by two reviewers.

The high quality of the RIF 2023 program was enhanced by two keynote speakers, delivered by experts in their fields, including: Dr. Akila Sarirete (Effat University, Jeddah, Kingdom of Saudi Arabia) and Amira Affef Bellil (PROPOLINA SARL, Algeria)

The event was also complemented with the Workshop "Women in Startups" which is dedicated to the projects that welling to become startups in emerging technologies. Organized in logic of open innovation, this initiative aims to create a dynamic between the students with ideas of startups and experts to create winning partnerships.

Preparing and creating an interesting and successful program for this seminary required the dedicated collaboration of many people. First of all, we greatly thank the authors, whose quality research is the essence of this seminary. Secondly, we would like to express our gratitude to the members of the program committee and additional reviewers for their

expert reviewing and valuable time. We also wish to include here a word of appreciation for the excellent organization carried out by the organizing committee who skillfully and efficiently created the ideal environment for a productive scientific networking. Finally, we must deeply thank the invited speakers for their excellent and invaluable contribution in sharing their knowledge and vision.

#### Fouzia Benchikha

LIRE Laboratory, University of Constantine 2 Abdelhamid Mehri, Algeria.

#### Faiza Belala

LIRE Laboratory, University of Constantine 2 Abdelhamid Mehri, Algeria.

#### Zizette Boufaïda

LIRE Laboratory, University of Constantine 2 Abdelhamid Mehri, Algeria.

#### Wafa Ghemmaz

LIRE Laboratory, University of Constantine 2 Abdelhamid Mehri, Algeria.

#### Sahar Smaali

LIRE Laboratory, University of Constantine 2 Abdelhamid Mehri, Algeria.

### **Seminary Program Chairs**

- Fouzia Magra-Benchikha UC2, Algeria
- Faïza Belala, UC2, Algeria
- Zizette Boufaida, UC2, Algeria

### **Seminary Organizing Chairs**

- Adla Bentellis, UC2, Algeria
- Wafa Ghemmaz, UC2, Algeria
- Naila Marir, UC2, Algeria
- Wissem Bouarroudj, UC2, Algeria

# **Workshop Organizing Chairs**

- Aicha Choutri, UC2, Algeria
- Asma Djellal, UC2, Algeria
- Ilhem Labed, UC2, Algeria
- Imène Bentounsi, UC2, Algeria
- Nadira Benlahreche, UC2, Algeria
- Souad Bouaïcha, UC2, Algeria
- Sahar Smaili, UC2, Algeria

# **Program Committee Members**

- Afifa Ghenai, UC2, Algeria
- · Aicha Aggoune, Guelma University, Algeria
- Akila Sarirete, Effat University, Kingdom of Saudi Arabia
- Chafia Bouanaka, UC2, Algeria
- Faiza Belala, UC2, Algeria
- Faiza Titouna, University of Batna, Algeria
- Faten Fakhfakh, University of Sfax, Tunisia
- Fouzia Magra-Benchikha, UC2, Algeria
- Khouloud Boukadi, University of Sfax, Tunisia
- Lamia Belguith Hadrich, University of Sfax, Tunisia
- Leila Ben Ayed, National School of Computer Science, Tunisia
- Maya Benabdelhafid, ESCF, Algeria
- Meriem Belguidoum, UC2, Algeria
- Meriem Djezzar, University of Khenchla, Algeria
- Nadia Zeghib, UC2, Algeria
- Naila Bouchemal, ECE School of Engineers Paris, FRANCE
- Nardjess Bouchemal, Mila University, Algeria
- Nassima Bouchareb, UC2, Algeria
- Nassira Chekkai, University of Lyon1, France

- Nawal Guermouche-Yalaoui, INSA of Toulouse, FRANCE.
- Ouassila Hioual, University of Khenchla, Algeria
- Souheila Boudouda, UC2, Algeria
- Zizette Boufaida, UC2, Algeria

# **Keynote Speakers**



Dr. Akila Sarirete

Assistant Professor & Dean of Effat College of Engineering at Effat University, Jeddah Kingdom of Saudi Arabia .

Understanding Your Potential in Computer Science: Lessons and Insights on Achieving Success



Miss. Amira Affef Bellil

Co-founder & manager of PROPOLINA SARL, Algeria.

Women in Startup: Becoming an Entrepreneur