



Ecole Supérieure en Informatique - Sidi Bel Abbès

Laboratoire de Recherche en Informatique de Sidi Bel-Abbès  
LabRI-SBA Laboratory



## Call for Papers

The 2022 First International Conference on Big data, IoT, Web intelligence and Applications (BIWA)

<https://biwa.esi-sba.dz/>

**(Papers presented in the BIWA'2022 conference will be submitted for inclusion into IEEE Xplore Digital Library)**



### Scope:

The 2022 First International Conference on Big data, IoT, Web intelligence and Applications will be held on 11-12 December 2022 as in Sidi Bel-Abbès, Algeria.

The BIWA'2022 will be the most comprehensive conference focused on Big data, IoT, Web intelligence and Applications (BIWA). The BIWA'2022 will provide an opportunity for academic and industry professionals to discuss the latest issues and progress in the area of BIWA such as model, algorithms, applications, services, performance and reliability for Big data, IoT and Web intelligence. In addition, the conference will publish high-quality papers that are closely related to the various theories and practical applications in Big data, IoT, and Web intelligence. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in those important subjects.

Doctoral papers are an opportunity for PhD students to present their work in progress on their doctorate, share and develop their research ideas in a supportive environment and with the participation of experts in the field.

The BIWA'2022 invites submissions for workshop proposals on current and emergent Big Data, IoT and Web Intelligent topics. Workshop attendants will be given the opportunity to exchange ideas and experience, establish common ground in research areas or practical problems, and identify new opportunities for collaboration and new directions for future work.

### Conference Areas

Each of these topic areas is expanded below but the sub-topics list is not exhaustive. Papers may address one or more of the listed sub-topics, although authors should not feel limited by them. Unlisted but related sub-topics are also acceptable, provided they fit in one of the following main topic areas:

1. Big Data & Data Sciences
2. Internet of things
3. Artificial Intelligence & Web Intelligence
4. Applications and Tools

## Area 1: Big Data & Data Sciences

- Big Data Models and Algorithms
- Big Data Analytics and Metrics
- Representation Formats for Big Data
- Big Data Semantics and Knowledge Organization
- Big Data Architectures
- Cloud Computing Techniques for Big Data
- Big Data as a Service
- Big Data in Mobile and Pervasive Computing
- Management Issues of Social Network Big Data
- Big Data Search and Mining
- Machine Learning/Deep Learning based on Big Data
- Computational Modeling and Big Data Integration
- Data Stream Algorithms
- Data and Information Quality for Big Data
- High Performance/Parallel Computing Platforms for Big Data
- Data Acquisition, Integration, Cleaning, and Best Practices
- Visualization Analytics for Big Data
- Large-scale Recommendation Systems and Social Media Systems
- Cloud/Grid/Stream Data Mining- Big Velocity Data
- Big Data Security, Privacy and Trust

## Area 2: Internet of things

- IoT Fundamentals
- IoT Architectures and Platforms
- Routing and Control Protocols
- Information Sharing and Interoperability in IoT
- AI and Machine Learning for the IoT
- Agent based Computing for IoT
- Semantic IoT Interoperability and Semantic Mediators
- Data Analysis and Visualization for Smart City, Green Systems and Transport Systems
- Edge AI/edge computing
- Web of Things including Hypermedia Agents for the IoT
- Sensors Data Management, IoT Mining, and Analytics
- Resource identification, discovery, and profiling in heterogeneous IoT
- Cloud Computing and Edge/Fog Computing for IoT
- Security, Privacy, and Trust for IoT

## Area 3 : Artificial Intelligence & Web Intelligence

- Ontologies Representation and Reasoning
- Semantic Data Integration and Ontology Engineering
- Uncertainty Models for Web Data and Services
- Data and Knowledge as a Services
- Semantic and Intelligent Services
- Web/Data Mining and Machine Learning
- Natural Language Processing (NLP) algorithms to build Knowledge Graphs
- Relationship extraction using Natural Language Processing (NLP) and deep learning
- Knowledge Graphs deep learning for semantic reasoning
- Semantic reasoning based on semantic technologies or deep learning
- Recommender Systems and Crowd-sourcing
- Semantic-based Data Mining and Data Pre-processing
- Semantic Data Indexing, Search, and Retrieval
- Linked data management and analytics
- Web of Things data analytics
- Distributed Ontologies and Contextual Reasoning
- Artificial Intelligence and IoT

- Blockchain analytics and technologies
- Web-scale security, integrity, privacy and trust

#### Area 4 : Applications and Tools

- IoT Applications, Services, and Implementations In Enterprise, Agriculture, Education, Industry, and Medicine
- Smart city applications and services
- Techniques and methods for post-COVID-19 learning, training and teleworking Technological focus for Smart Environments
- Semantic, Web-based, and Big Data applications
- Services and Cloud-based applications
- IoT and Intelligent Systems applications
- Novel Applications of IoT in Industry (e.g., medicine, manufacturing, agriculture, business processes, etc. )
- Monetization services and applications
- Healthcare and medical applications and services
- Complex Big Data Applications in Science, Engineering, Medicine, Healthcare, Finance, Business, Law, Education, Transportation, Retailing, Telecommunication
- Big Data Analytics in Small Business Enterprises (SMEs)
- Big Data Analytics in Government, Public Sector and Society in General
- Real-life Case Studies of Value Creation through Big Data Analytics
- AI Applications in Swarm/Multi Robotics Systems

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### SUBMISSION

All submitted papers to BiWa'2022 should be prepared in English according to IEEE format using IEEE Conference Paper Template. All manuscripts are limited to six (6) pages and have not been published, submitted, or accepted for publication elsewhere. Submission of abstract only is not accepted. Submission of the papers following the poster template is not accepted. Authors are invited to submit a full paper not more than 6 pages to BiWa' 2022 as PDF file through the EasyChair system: <https://easychair.org/conferences/?conf=biwa2022>

### PRESENTATION & PUBLICATION

Papers presented in the BIW'2022 will be submitted for inclusion into IEEE Xplore as well as other Abstracting and Indexing (A&I) databases. Moreover, outstanding papers will be recommended to international journals indexed by SCI/E or SCOPUS.

### IMPORTANT DATES

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Full-paper submission: ~~October 1<sup>st</sup>, 2022~~ **October 8, 2022**

Acceptance notification: October 25, 2022

Camera Ready: November 10, 2022

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