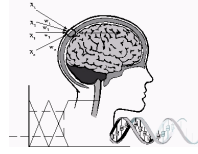




International

*Innovation in Knowledge Based and Intelligent
Engineering Systems*



INVITED SESSION SUMMARY

Title of Session:

AI-Enhanced Blockchain Systems: Intelligent, Trustworthy, and Decentralised Solutions

Name, Title and Affiliation of Chair:

Chair:

Dr. Hajer Nabli, Assistant Professor, ISITCom, University of Sousse, Tunisia

Co-Chair:

Dr. Raoudha Ben Djemaa, Associate Professor, ISITCom, University of Sousse, Tunisia

Details of Session (including aim and scope):

This invited session aims to bring together researchers and practitioners to explore the integration of Artificial Intelligence (AI) and Blockchain technologies for the development of intelligent, secure, trustworthy, and decentralised systems. Blockchain provides fundamental properties such as trust, immutability, and decentralisation, while AI enables adaptive learning, autonomous decision-making, and predictive intelligence. Their convergence supports the design of next-generation digital infrastructures across multiple application domains.

The session solicits high-quality original research papers and state-of-the-art survey articles addressing theoretical foundations, system architectures, algorithms, and prototype implementations at the intersection of AI and blockchain.

Topics of interest include, but are not limited to:

- Intelligent and autonomous smart contracts
- AI-enhanced and adaptive consensus mechanisms
- Decentralised and federated learning over blockchain infrastructures
- Data governance, privacy-preserving analytics, and secure data sharing
- Blockchain-based AI services, platforms, and marketplaces
- Explainable, ethical, and trustworthy AI in decentralised environments
- AI-driven optimisation of blockchain scalability, security, and interoperability
- Intelligent querying, indexing, and data retrieval mechanisms for blockchain systems
- AI for anomaly detection, fraud prevention, and threat intelligence
- Cross-chain intelligence and AI-enabled interoperability frameworks
- Benchmarking methodologies, evaluation frameworks, and performance analysis for AI-blockchain systems

Both conceptual and experimental contributions are welcome, with particular emphasis on validated frameworks, prototype-based evaluations, real-world applications, and comprehensive surveys.

Main Contributing Researchers / Research Centres (tentative, if known at this stage):

Academic and industrial research groups specialising in artificial intelligence, blockchain technologies, distributed systems, data management, and intelligent infrastructures.

Website URL of Call for Papers (if any):

To be provided upon acceptance

Email & Contact Details:

Dr. Hajer Nabli, University of Sousse, Tunisia : Email: hajer.nabli@isitc.u-sousse.tn

Dr. Raoudha Ben Djemaa, University of Sousse, Tunisia : Email: raoudha.benjema@isitc.u-sousse.tn