

IEEE BIBM 2024 Workshop

1. Workshop Title

*Information Systems for Health Emergencies
and Patients Oriented Research
(IS-HE&POR)*

2. Introduction to Workshop

The workshop on *Information Systems for Health Emergencies and Patients Oriented Research (IS-4HE&POR)* addresses Biomedicine and Health Informatics subjects associated with health emergencies and responses, along with digital applications directed to the patient's safety and quality of life. While patient-based research is critical, vital in many cases, health emergencies are highly impacting the fragile equilibria within the healthcare supply chains.

In this way, the development of scientific and technological tools (e.g., AI-powered imaging, predictive analytics of outbreaks), in conjunction with flexible manufacturing and biotechnological platforms (e.g., vaccines, prophylactics drugs), allow either enhanced responses from the vigilance/reporting digital systems, improved supply of drugs and medical devices, or better performance of healthcare systems. For that, recent advances in IS that support emergencies responses or mitigate patient's daily risks are highly appreciated.

The **IS-4HE&POR** workshop is also promoting an industry track, with important partners presenting pilots and demonstrating the implementation of innovative ideas.

3. Research Topics Included in the Workshop

All workshop accepted papers and posters will appear in the IEEE Conference Proceedings (<https://ieeexplore.ieee.org/xpl/conhome/1001586/all-proceedings>)

Selected articles will be invited to submit an extended version to be published after the review process in special journal issues, within the proposed thematic areas: **(ongoing...)**

Advanced Methodologies and Technologies for Innovative Information Systems

From Intelligent Manufacturing and Stockpiling to Enhanced Healthcare Supply Chains

Medical and Pharmaceutical Digital Tooling for Improved Patient's Quality of Life

The workshop considers original works, among others including the multi-disciplinary or trans-sectoral topics:

- Active Pharmaceutical Ingredients (API), Therapeutic medicines, mapping platforms of therapeutics
- Anti-Microbial Innovations, Anti-Microbial Resistance, Anti-Microbial Stewardship

- Artificial Intelligence (AI), AI-powered Imaging, Data Integration and AI
- Big Data Analytics, Predictive analytics, Demand Forecasting/Predictability
- Bio-technologies, Biotechnological platforms, Flexible Manufacturing
- Bioengineering, Bioprocesses Simulation, Bioinformatics Systems
- Clinical decision support systems, Clinical Health Research, Clinical trials
- Cross-Sectional studies, Longitudinal Cohort studies, Mixed method studies
- Databases, Data acquisition, Data curation, Data management, Temporal Database Systems
- Decision support systems, Information Systems, Vigilance and Reporting Systems
- Deep Learning, Machine Learning, Neural Networks
- Drugs shortages, Security of Supply, Patients care, Clinical-pharmacologic needs
- eHealth Digital Transformation, Standards and Profiles of Interoperability
- Healthcare systems, Health Data, Health emergency, One Health approaches
- Hospital Pharmacies, Hospital setting, Hospital-wise analyses
- Knowledge based systems, Knowledge Graphs, Knowledge Management, Semantic Web applications
- Medical Informatics, Medical devices, Medical technology, Digital health
- Medical countermeasures, Consequence Management, Use and Intervention
- Monte Carlo Simulation, Simulation-optimization techniques
- Multi Criteria Decision Aiding/Making (MCDA/M), analytic hierarchy processes, causal and anticipatory networks, clustering methods, reference set methods, sorting methods
- Pandemic/ Epidemic Intelligence, Hotspots Identification, Zoonotic Infections
- Patient Oriented Research, Patient Safety, Patient Perspectives, Precision medicine
- Patient risks, Quality of Life (QoL), Adverse health effects
- Preparedness and response, Flexible Manufacturing, Bioinformatics Systems,
- Pharmaceutical Supply Chains, Healthcare Supply Chains, Health commodities
- Manufacturing good practice and compliance, Defects and Recalls, Disruption communications, Prevention
- Public health emergency, medical responses, decision-making in emergency
- Quantitative systems pharmacology, Systems Dynamics, Computational Drug Repurposing
- Rapid Risk Assessments, Risk Management, Contingency strategies, Critical medicines, Disruptions mitigation
- Statistical Computing, Stochastic Programming, Robust Optimization
- Standards, Interoperability, Ontologies, FAIR principles
- Trade Rules, Arbitrage/Parallel Trade, Procurement, Payment models
- Vaccines, Vaccine Adjuvants, Vaccines Supply Chain (VSC)

4. **Workshop Style:** Full onsite, full online, or **hybrid**

- If the organizers decide to organize full online or hybrid workshop, they need to take care of the virtual meeting platform for the workshop.

5. **Important Dates**

June 25, 2024: Opening papers acceptance

Oct 10, 2024: Due date for full workshop papers submission

Nov 5, 2024: Notification of paper acceptance to authors

Nov. 21, 2024: Camera-ready of accepted papers

Dec 3-6, 2024: Workshops

[On-Line Paper Submission](#)

(re-directs to the IEEE BIBM submission webpage)