



## AI4Health 2025

Special Session on Foundation Models in AI: Shaping the Future of Health and Medicine

at the **2<sup>nd</sup> IEEE Afro-Mediterranean Conference on Artificial Intelligence (2025 IEEE AMCAI)**

Valenciennes, France, October 14-16, 2025

Conference website: <https://amcai-atia.tn/>

### Special Session Organizers

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### Objectives and topics

As Artificial Intelligence continues to redefine the boundaries of innovation, its transformative potential in healthcare has become a cornerstone of contemporary research. To further explore this synergy, we propose a **Special Issue** titled "**Revolutionizing Healthcare through Artificial Intelligence: Innovations, Applications, and Future Perspectives**" for the prestigious IEEE AMCAI conference.

This Special Issue aims to provide a comprehensive platform for showcasing groundbreaking applied and theoretical research at the intersection of AI and healthcare. We invite submissions addressing challenges and opportunities in

leveraging AI to enhance healthcare delivery, medical diagnostics, patient outcomes, and operational efficiency. By highlighting diverse approaches, we aim to illuminate how AI is solving pressing real-world problems in biomedicine, bioinformatics, medical imaging, and beyond.

The scope of the Special\_Session\_Abbreviation\_Name 2025 includes, but is not limited to the following topics:

☐ **AI in Medical Diagnostics:**

- Machine learning models for early detection of diseases such as cancer, cardiovascular conditions, and neurodegenerative disorders.
- Development of AI-based clinical decision support systems.

☐ **Intelligent Patient Monitoring:**

- Wearable devices and AI-powered IoT for real-time health monitoring.
- Predictive analytics for patient risk stratification and management.

☐ **Medical Imaging and Computer Vision:**

- AI techniques for medical image analysis, segmentation, and anomaly detection.
- Advanced computer vision applications in radiology and pathology.

☐ **Personalized and Precision Medicine:**

- AI-driven solutions for tailoring treatments to individual patient needs.
- Genomics and bioinformatics leveraging AI for drug discovery.

☐ **AI in Mental Health:**

- Natural Language Processing (NLP) for psychological assessment and therapy.
- Virtual assistants and chatbots for mental health support.

☐ **AI-Powered Robotics in Healthcare:**

- Surgical robots and autonomous systems for precision procedures.
- Rehabilitation robots leveraging AI for improved patient outcomes.

☐ **Epidemic Management and Public Health:**

- AI-driven tools for epidemic prediction and outbreak tracking.
- Modeling and analysis of healthcare system capacities.

☐ **Ethical AI and Security in Healthcare:**

- Addressing issues of bias, transparency, and accountability in AI solutions.
- Ensuring data privacy and security for AI-powered healthcare systems.

☐ **Next-Generation Applications:**

- Exploring the use of AI in telemedicine, virtual reality (VR), and augmented reality (AR) in healthcare.

## Important dates

Paper Submission Deadline: April 15, 2025  
Authors Notification: June 15, 2025  
Camera Ready and Registration: July 05, 2025  
Conference date: October 14-16, 2025

## Program Committee (to be invited)

Dr. Mohamed Ali Hamdi, INSAT, University of Carthage  
Dr. Zaineb Chelly, Université de Versailles Saint-Quentin-en-Yvelines University (UVSQ), Faculté de Sciences, France  
Dr. Chiheb Nasr Eddine, Université de Jadda (KSA)  
Dr. Waad Bougali, Université de Jadda (KSA)  
Dr. Rimah Amami, Imam AbdArahman Ibn Faisal university Dammam (KSA)  
Dr. Aymen Louati, ISI Kef, Université de Jandouba  
Dr. Imen Khamessi, ISI Kef, Université de Jandouba  
Dr. Ons Maatouk, ISAEF, Université de Gafsa  
Dr. Amina Houari, University Mustapha Stambouli of Mascara , Algeria

## Submission

All contributions should be original and not published elsewhere or intended to be published during the review period. The contributions should address research questions that relate to one of the topics listed above.

Authors are invited to submit their papers electronically in pdf format, through EasyChair at <https://easychair.org/conferences/?conf=amcai2025> . All the special sessions are centralized as tracks in the same conference management system as the regular papers. Therefore, to submit a paper please activate the following link and select the track: **AI4Health 2025: Special Session on Artificial Intelligence for Transforming Healthcare and Medicine.**

Manuscripts should be prepared in 10-point font using the IEEE 8.5" x 11" two-column conference format  
<https://www.ieee.org/conferences/publishing/templates.html>

Submitted regular papers are written in English, between 6 to 8 pages (including all figures, tables, and references).

Submissions not following these guidelines may be rejected without review. Also, submissions received after the due date, exceeding the length limit, or not appropriately structured may also not be considered.

To ensure high quality, all submissions are blind peer-reviewed by at least three reviewers from the **AI4Health 2025 Program Committee.**

All accepted papers must be presented by one of the authors who must register for the conference and pay the fee.

All accepted and presented papers will be submitted to IEEE Xplore for inclusion.