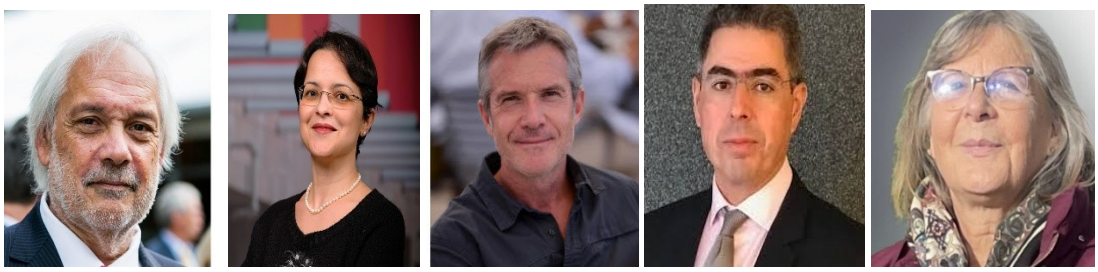
ICAHS 2025: Advancing Healthcare Systems through Interdisciplinary Approaches

The International Conference on Advanced Healthcare Systems (ICAHS 2025), hosted by AWG Healthcare Systems and funded by IFORS, was held on 5–6 December 2025 in Hammamet, Tunisia. The website of the conference is https://sites.google.com/view/icahs2025/home . The inaugural edition was offered in a hybrid format, allowing participants to attend either onsite or online, and successfully brought together researchers, practitioners, and policymakers from 12 countries.

ICAHS 2025 explored healthcare systems through an interdisciplinary lens, bringing together expertise from industrial engineering, artificial intelligence, biomedical engineering, architecture, and economics. The conference emphasized that integrating these diverse disciplines is essential for innovating healthcare solutions, improving operational efficiency, patient care, and the sustainability of healthcare systems.

The conference received 142 paper submissions, of which 105 were accepted for presentation. All accepted papers will be submitted to IEEE Xplore. Selected best papers will be invited to submit extended versions for a special issue titled *"Optimization, Management, and Computational Intelligence in Healthcare Systems"* in the Journal of Management Science and Information Technology. The program featured five keynote speakers from Switzerland, France, Canada, and Tunisia, who shared insights into emerging research and challenges in healthcare systems.



Some of ICAHS 2025 Keynote speakers (left to right): **Pr. Phillipe Wieser** (EPFL, Swithserland), **Pr. Monia Rekik** (FSA, Canada), **Pr. Franck Fontanili** (IMT, France), **Pr. Fraouk Yalaoui** (UTT, France), **Pr. Meriem Jaidane** (ENIT, Tunisia)

A special panel session brought together three distinguished Tunisian researchers, engaging in a stimulating discussion on the intersections of architecture, artificial intelligence, and healthcare, highlighting the value of interdisciplinary collaboration in addressing complex healthcare challenges.

The conference also included 18 parallel sessions, covering themes such as:

- Assessing Healthcare System Performance via Quantitative and Economic Techniques
- Explainable and Trustworthy AI for Advanced Healthcare Systems
- Decision Support Tools for Medical Diagnosis and Therapeutic Decision-Making
- Architectural Design for Well-Being and Human Health
- AI and Digital Technologies for Healthcare Marketing Strategy: Innovation and Social Acceptability

Additional topics included biomedical engineering, mechatronics, digital health technologies, and Smart and Sustainable Healthcare Operations, demonstrating how the integration of multiple disciplines can enhance patient outcomes, operational efficiency, and system sustainability.

ICAHS 2025 fostered global collaboration, bringing together participants from Tunisia, France, Belgium, India, China, Saudi Arabia, Italy, USA, Japan, the United Kingdom, Canada, and Morocco. The diversity of contributions showcased the crucial role of interdisciplinary approaches in advancing healthcare systems research and practice, offering actionable solutions to complex challenges in healthcare operations and management.

The inaugural ICAHS established a vibrant platform for interdisciplinary exchange in healthcare systems. By combining cutting-edge research, practical applications, and global perspectives, the conference underscored the importance of collaboration across disciplines to drive innovation, improve healthcare delivery, and shape sustainable healthcare systems worldwide.

The ICAHS 2025 Group Picture