Call For Paper

CBMS 2025 - 38th IEEE International Symposium on Computer-Based Medical Systems `https://2025.cbms-conference.org/`

Dear Colleagues,

We are pleased to invite you to submit your paper at the Special Track *Multimodal Artificial Intelligence in Healthcare*, held in conjunction with CBMS 2025.

The intersection of Artificial Intelligence (AI) and Healthcare has opened new frontiers in research, heralding an era of innovation and discovery. The increasing availability of heterogeneous information has underscored the need for approaches capable of learning from diverse data types, driving the advancement of Multimodal Learning techniques. These approaches have significantly enhanced the capabilities of medical applications, offering transformative potential in areas such as diagnostic accuracy and personalized treatment plans. The Special Track *Multimodal Artificial Intelligence in Healthcare* seeks to bring together cutting-edge research and developments in this dynamic field. We invite contributions that push the boundaries of knowledge and application in Multimodal Learning, enhancing our ability to tackle complex medical challenges and improve patient outcomes.

The Special Track *Multimodal Artificial Intelligence in Healthcare* aims to unite researchers and practitioners working at the forefront of Multimodal AI techniques. It offers a platform to present and discuss recent advancements in methodologies, practices, strategies, and tools within this interdisciplinary field. By fostering discussion and knowledge exchange, this track encourages collaboration and the sharing of novel research findings, technological developments, and innovative applications, contributing to the advancement of AI in healthcare.

Topics of interest include, but are not limited to:

- **Data Fusion Techniques for Healthcare**: Novel algorithms and methods for integrating heterogeneous data sources such as imaging, genomics, EHRs, and wearable sensors.

- **Multimodal AI for Disease Diagnosis and Prognosis**: AI-driven approaches combining various data types for more accurate diagnosis, disease progression prediction, and personalized treatment strategies.

- **Natural Language Processing (NLP) and Multimodal Data Integration**: The use of NLP to extract insights from clinical notes and

combine them with structured and unstructured data (e.g., EHRs, imaging) for improved decision support.

- **Multimodal AI for Personalized Medicine**: Leveraging AI to integrate genomic, phenotypic, and clinical data for individualized treatment plans and drug discovery.

- **AI in Multimodal Medical Imaging**: Techniques for combining imaging data (e.g., MRI, CT, X-ray) with other modalities for enhanced diagnostic accuracy and clinical insights.

- **Multimodal AI in Remote and Telemedicine Applications**: AI-driven integration of data from telemedicine platforms, remote sensors, and patient-reported outcomes for long-distance clinical care.

- **Resilient Multimodal Artificial Intelligence**: Developing systems that operate effectively in challenging, noisy, incomplete, and uncertain real-world biomedical settings.

- **Explainable AI (XAI) in Multimodal Healthcare Systems**: Methods for enhancing the transparency and interpretability of multimodal AI models, ensuring that clinicians and patients can trust AI-driven decisions.

- **Performance Evaluation**: Methods and metrics for assessing the performance of multimodal learning models in biomedicine.

Important Dates

The Special Track will take place in parallel with the general conference track. Submission deadlines are as follows:

- Paper submission deadline: March 7, 2025

- Notification of acceptance: April 20, 2025

- Camera-ready due: April 30, 2025

- Registration

  - Early registration deadline: May 15, 2025
  - Late registration deadline: June 8, 2025

- Conference: June 18-20, 2025

People

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