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1st INTERNATIONAL SCHOOL ON
GENERATIVE & MULTIMODAL AI FOR HEALTHCARE

GeMAIHc 2027

Milan, Italy

February 1-5, 2027

https://gemaihc.irdta.eu/2027/

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Co-organized by:

Human Technopole

IRDTA – Institute for Research Development, Training and Advice

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Early registration: September 18, 2026

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SCOPE

AI is rapidly redefining biomedical research, clinical decision-making, and healthcare delivery worldwide. GeMAIHc 2027 will provide participants with a comprehensive overview of state-of-the-art AI methodologies. Topics will include generative modelling, multimodal data integration and augmentation, large language models and clinical NLP, medical image synthesis and analysis, as well as evaluation, robustness, validation, ethical considerations, and regulatory aspects of AI systems in healthcare.

GeMAIHc 2027 aims to become a leading international forum at the intersection of generative AI, multimodal learning, and healthcare innovation. The program will emphasize both methodological foundations and real-world clinical applications, combining theoretical insights with practical perspectives.

This interdisciplinary event will feature 18 monographic three-hour courses, 2 keynote lectures, 3 scientific sessions, 1 symposium, and a hackathon.

Leading academics and industry pioneers will share their expertise and perspectives with attendees. In-person interaction and networking will be central components of the event, while full remote participation will also be possible.

ADDRESSED TO

The program is open to PhD students and postdoctoral researchers in AI, data science, and biomedical disciplines, clinicians and healthcare professionals, industry practitioners and innovators, and policymakers and stakeholders in digital health. There are no formal academic prerequisites for participation. Researchers and professionals at all career stages are welcome.

An international audience is expected, with backgrounds spanning computer science, medicine, engineering, mathematics, statistics, physics, and the social sciences.

GeMAIHc 2027 will offer a unique opportunity to gain in-depth knowledge of a rapidly evolving field, to interact with experts across disciplines, to establish collaborations and expand professional networks, and to explore how AI is reshaping the future of healthcare.

VENUE

GeMAIHc 2027 will take place in Milan, one of Europe's leading international centers for science, industry, fashion, and finance.

The venue will be:

Human Technopole
Viale Rita Levi-Montalcini, 1
20157 Milan, Italy

https://humantechnopole.it/en/

STRUCTURE

Three parallel courses will run throughout the event. Participants will be free to choose the sessions they wish to attend and may move between courses at any time.

A symposium will offer participants and companies the opportunity to present ongoing research or industrial developments through 10-minute oral presentations.

The school will include a hackathon, during which participants will work in teams to tackle challenges in generative and multimodal AI for healthcare.

All lectures will be video recorded and made available to participants for 45 days after the event.

Full live online participation will be possible. Nevertheless, the organizers emphasize the importance of in-person interaction and networking in research training events of this kind.

KEYNOTE SPEAKERS

Deborah Estrin (Cornell University), Transforming Longitudinal Care with Digital Biomarkers and Therapeutics

Lyle Palmer (Adelaide University), Deep Learning in Medicine: Some Lessons from Epidemiology and Genomics

PROFESSORS AND COURSES

Pierre Baldi (University of California Irvine), [introductory/advanced] The AI-driven Healthcare of the Future

David Buckeridge (McGill University), [intermediate] Multi-Modal Data Analysis in Population and Public Health

Alejandro Frangi (University of Manchester), [intermediate/advanced] Virtual Patient Populations for In Silico Trials Using Generative AI Based on Multimodal Real-World Data

Charles Friedman (University of Michigan), [introductory] Synergizing AI and Learning Health Systems to Transform Health

Judy Wawira Gichoya (Emory University), [introductory/advanced] Combination in a Hands on Lab for Harmonizing Radiology Datasets

Maryellen Giger (University of Chicago), [introductory/intermediate] Role of Data & Algorithms in Trustworthy Medical Imaging AI

Casey Greene (University of Colorado), [introductory/advanced] Translating Generative AI into Healthcare from Pharmacogenomics to Foundation Models

Tina Hernandez-Boussard (Stanford University), [intermediate/advanced] The AI Lifecycle in Healthcare: Evaluation, Deployment, and Responsible Implementation

Jianying Hu (IBM Thomas J. Watson Research Center), [intermediate/advanced] Advanced Computing for Biomedical Research and Discovery

Jayashree Kalpathy-Cramer (University of Colorado), [introductory] Toward Digital Twins: Multimodal AI for Imaging and Precision Medicine

Alex John London (Carnegie Mellon University), [intermediate/advanced] Ethical and Scientific Challenges to Unlocking the Clinical Value of Artificial Intelligence

Asoke Nandi (Brunel University of London), [introductory/advanced] Selected Case Studies of Medical Image Segmentation

Tom Pollard (Massachusetts Institute of Technology), [introductory/intermediate] Data: The Foundation, Constraint, and Failure Mode of Deployable Health AI

Hoifung Poon (Recursion), [advanced] Toward Virtual Patient: AI for Accelerating Medical Discovery

Jian Tang (Mila-Québec AI Institute), [introductory/advanced] Generative AI for Protein Design

Peter van Ooijen (University of Groningen), [intermediate] Multimodal AI for Adaptive Radiotherapy: Tumor Segmentation, Uncertainty, and Explainability

Karin Verspoor (Royal Melbourne Institute of Technology), [introductory/intermediate] AI Scientists and beyond: Roles for GenAI in Biomedical Research and Discovery

Jelmer M. Wolterink (University of Twente), [intermediate/advanced] Data Representations in Health Digital Twinning: From Features to Foundation Models

HT RESEARCH PERSPECTIVES

Human Technopole will organize 3 scientific sessions:

Probabilistic Models for (Medical) Image Analysis, by Jan Funke, Florian Jug, Federico Carrara, and Benjamin Salmon

AI Models for Computational Biology, by Andrea Sottoriva, Michele Calabrò, and Manuel Dileo

AI in Health Data Science, by Francesca Ieva, Andrea Ganna, Michela Carlotta Massi, Nicole Fontana, and Alessia Mapelli

SYMPOSIUM

A symposium will feature voluntary 10-minute oral presentations on ongoing research projects and industrial developments.

Participants interested in presenting should submit a one-page abstract including title, authors, and summary to david@irdta.eu by January 8, 2027.

HACKATHON

Hands-on team activities will be organized around challenges in generative and multimodal AI for healthcare. The challenges will be released two weeks before the beginning of the school. A jury will evaluate the submissions, and the winners will be announced at the end of February 2027. Winning teams will receive a modest monetary prize, while runners-up will receive certificates of recognition.

ORGANIZING COMMITTEE

Jan Funke (Milan)
Ilaria Guerini (Milan)

Francesca Ieva (Milan)
Carlos Martín-Vide (Tarragona, program chair)
Michela Carlotta Massi (Milan, local chair)
Santiago Montes (Tarragona, webpage)
Sara Morales (Luxembourg, finances)
David Silva (London, organization chair)

REGISTRATION

Registration is available at:

https://gemaihc.irdta.eu/2027/registration/

The selection of six courses requested during registration is tentative and non-binding. This information will help estimate demand for logistical planning purposes.

As venue capacity is limited, registrations will be processed on a first-come, first-served basis. Registration will close once capacity has been reached. Early registration is strongly recommended.

FEES

Registration fees include access to all school activities and lunches.

Several early registration deadlines are available, and fees vary depending on the registration period.

Fees are identical for on-site and online participation.

ACCOMMODATION

Accommodation suggestions will be provided in due time at:

https://gemaihc.irdta.eu/2027/accommodation/

CERTIFICATE

Participants will receive a certificate indicating 40 hours of academic activities. This certificate should be suitable for participants seeking ECTS recognition from their home institutions.

SPONSORS

Companies, institutions, and organizations interested in sponsoring the event may download the sponsorship leaflet from:

https://gemaihc.irdta.eu/2027/sponsors/

QUESTIONS AND FURTHER INFORMATION

david@irdta.eu

ACKNOWLEDGMENTS

Human Technopole

Universitat Rovira i Virgili

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