



GENERATIVE ARTIFICIAL INTELLIGENCE FOR BIOENGINEERING

XLV GNB ANNUAL SCHOOL 2026

**7-10 SEPTEMBER 2026
BRIXEN (ITALY)**



The **GNB XLV Annual School 2026 – Generative Artificial Intelligence for Bioengineering** will be held in Brixen (Italy) from 7th to 10th September 2026.

The school focuses on the impact of Generative Artificial Intelligence on Bioengineering research and education. Generative AI is increasingly influencing **data analysis, biological modeling, experimental design, and scientific communication**, offering new opportunities while also posing methodological, ethical, and responsibility-related challenges.

The main objective of the school is to **explore the use of Generative AI in Bioengineering through a critical and rigorous methodological perspective**. The program is not intended to teach the development of new AI models, but rather to promote awareness of the potential, limitations, and implications of these technologies when applied to Bioengineering research.

The school is primarily addressed to **PhD students and early-career researchers**, and aims to provide a 360-degree overview of Generative AI in Bioengineering, supporting responsible and informed integration of these tools into scientific practice.

PRELIMINARY AGENDA

	Monday - 07/09/2026	Tuesday - 08/09/2026	Wednesday - 09/09/2026	Thursday - 10/09/2026
09:00 - 09:45	Registration and opening of the GNB school	AI bias and data quality (Stephane Meystre - SUPSI Lugano)	Generative AI in Clinics (Mario Mascaldi - Firenze)	Enhancing data and model robustness through AI Sandboxes (Arnaud Céol - ICSC)
09:45 - 10:30	The AI trajectory in Bioengineering (Riccardo Bellazzi - Pavia)	Cognitive bias and evidence generation in medicine - impact on Generative AI (Leandro Pecchia - Campus Bio-Medico)	Automated signal analysis (Anna Bianchi - Polimi)	Toward Reliable Synthetic Data: Statistical Distances for Generative Models Evaluation (Giuseppe Jurman - FBK Trento)
10:30 - 11:00	Coffee break	Coffee break	Coffee break	Coffee break
11:00 - 11:45	Introduction to Generative AI (Nicola Toschi - Tor Vergata)	Reproducibility in the era of generative AI: crisis or opportunity? (Stefano Diciotti - Bologna)	The promising role of synthetic data for responsible innovation with AI (Shalini Kurapati - ClearBox AI)	Generative AI in Pharmaceuticals (Laura Paulowski - AstraZeneca)
11:45 - 12:30	Basics of CNNs (Concetto Spampinato - Catania)	From Data to Decisions: XAI and LLMs for Data-Intensive Healthcare (Carlo Combi - Verona)	Generative AI for Clinical Engineering (Ernesto Iadanza - Siena)	Responsible AI (Barbara di Camillo - Padova)
12:30 - 14:00	Lunch break	Lunch break	Lunch break	Lunch break
14:00 - 14:45	VAE, GAN & Diffusion models (Paolo Soda - Campus Bio-Medico)	Generative AI and human brain function: the role of LLMs (Fabrizio Esposito - Napoli)	Large Language Models for Clinical Decision Support (Enea Parimbelli - Pavia)	Privacy preserving methods for AI in Healthcare (Bogdan Kulinich - CHUV Lausanne)
14:45 - 15:30	Transformers (Alessandro Bria - Cassino)	Bioinformatics and Genomics (Alberto Magi - Firenze)	GNB/EAMBES/IFMBE Awards Ceremony	AI Regulation (Fishbowl Session)
15:30 - 16:15	Talks and Hands-on session	Talks and Hands-on session	Lectio Magistralis (Bjoern Eskofier - LMU Munich)	Students' pitch & Awards
16:15 - 17:00			Hands-on session	
17:00 - 17:15				Closing Ceremony
17:15 - 17:30				
19:00 - 21:00	Social Event			

ORGANIZATION

CHAIRS

Riccardo Bellazzi (Università di Pavia)
Stefano Diciotti (Università di Bologna)
Ernesto Iadanza (Università di Siena)
Enea Parimbelli (Università di Pavia)

LOCAL ORGANIZERS

Gruppo Nazionale di Bioingegneria (GNB)

ORGANIZING SECRETARY

Pragma Congressi (Pavia)

GNB general assembly will take place on
Friday 11 September 2026