ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

DIPARTIMENTO
DI PSICOLOGIA
"RENZO CANESTRARI"

**PhD Program in Psychology**

**Seminar**

# *Psychology and Artificial Intelligence: innovations, clinical applications and emerging risks*

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*Harvard Medical School*

***Friday December 19, 2025***

***14.30-16.30***

***Room 2.7, Via dell'Università 50, Cesena***

Psychology and Artificial Intelligence are converging at a pivotal moment, offering new ways to address the global mental health crisis. There are 1.1 billion people worldwide struggling with mental health problems, yet 85% of them receive no treatment due to cost, limited clinician availability, and persistent stigma. Advances in wearable devices, smartphone sensors, and computational models now allow AI to expand access by powering digital mental health tools. The rapid spread of generative AI has enabled the development of chatbots that can support individuals in moments of need, offer psychoeducation, and complement traditional care. In parallel, AI systems capable of analyzing large streams of behavioral and physiological data can provide personalized feedback to users of health trackers, helping identify distress or promote healthier routines. However, these innovations come with emerging risks, including misinformation, hallucinations, privacy breaches, bias, over-reliance on automated systems, and the potential misuse of AI tools in vulnerable populations.

**The seminar will address the following questions:**

1. How can AI and sensor-based technologies improve access to mental health care?
2. What valuable roles can chatbot and generative AI tools play in supporting mental health?
3. What key risks must be addressed to ensure safe and ethical AI use in vulnerable populations?

**Suggested readings:**

Ali, M., Ali, S., Abbas, Q., Abbas, Z., & Lee, S. W. (2025). Artificial intelligence for mental health: A narrative review of applications, challenges, and future directions in digital health. *Digital Health, 11*.

Dehbozorgi, R., Zangeneh, S., Khooshab, E., Nia, D. H., Hanif, H. R., Samian, P., Yousefi, M., Hashemi, F. H., Vakili, M., Jamalimoghadam, N., & Lohrasebi, F. (2025). The application of artificial intelligence in the field of mental health: A systematic review. *BMC Psychiatry, 25*(1), 132.

Hua, Y., Na, H., Li, Z., Liu, F., Fang, X., Clifton, D., & Torous, J. (2025). A scoping review of large language models for generative tasks in mental health care. *npj Digital Medicine, 8*(1), 230.