

RESEARCH THEME

XLI Cycle – a.y. 2025/2026

Title of the doctoral research AI for future materials design research

Proponent professor Marinella Ferrara

Abstract

The use of Artificial Intelligence (AI) tools raises many challenging questions across all sectors about the nature of teaching, learning and assessment. In the design sector, the application of Generative AI is changing operational and ideational processes, triggering new strategies for the explanation of design thinking.

What is happening in the area of materials for design? How can intelligent technology improve the knowledge, research and choice of material resources and the applicative development of materials, creating values in the perspective of a sustainable, synergic, and inclusive future? How does this technology change the design process of and for materials?

The research about "How the interaction with the AI and/or GenAI can reshape the way to design with and for materials" is the path chosen for this research, oriented towards the study of materials for the future, which can give rise to new materialities in design within the sustainable design paradigm.

Keywords

Artificial Intelligence, design with/for materials, future materials