RESEARCH THEME

XLII Cycle – a.y. 2026/2027

Title of the doctoral research	Toward a Cross-Modal Framework for Regenerative Interior Design
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Abstract

Spatial experience emerges from the dynamic interplay of multisensory and proprioceptive cues, processed through intersecting neural pathways that contribute to build identity, memory, and sense of belonging. In the context of climate change and the need to reuse existing assets, interior space must be reconsidered as a multisensory and affective medium with regenerative potential, able of activating mechanisms of involuntary fascination and stress reduction. This shift is necessary to counteract a commercial tendency to prioritize visual clarity and functional efficiency over affective engagement, resulting in interiors that are formally coherent yet sensorially and emotionally neutral. By integrating insights from environmental psychology, cognitive neuroscience, and spatial design, a cross-modal framework can restore experiential depth to interior environments and reconnect design practice with the embodied and emotional dimensions of place. When sensory inputs across multiple modalities are congruent, the brain integrates them seamlessly, facilitating cognitive processing and eliciting mental states associated with aesthetic appreciation, comfort, and embodied engagement. Expected objective of this research is to define a theoretically grounded framework for regenerative interiors that underpins both assessment methods and design practices for the reuse of existing buildings, fostering multisensory congruence, user-centered comfort, and heightened emotional engagement.

Keywords Multisensory Design, Regenerative Interiors, Cross-modal congruence.