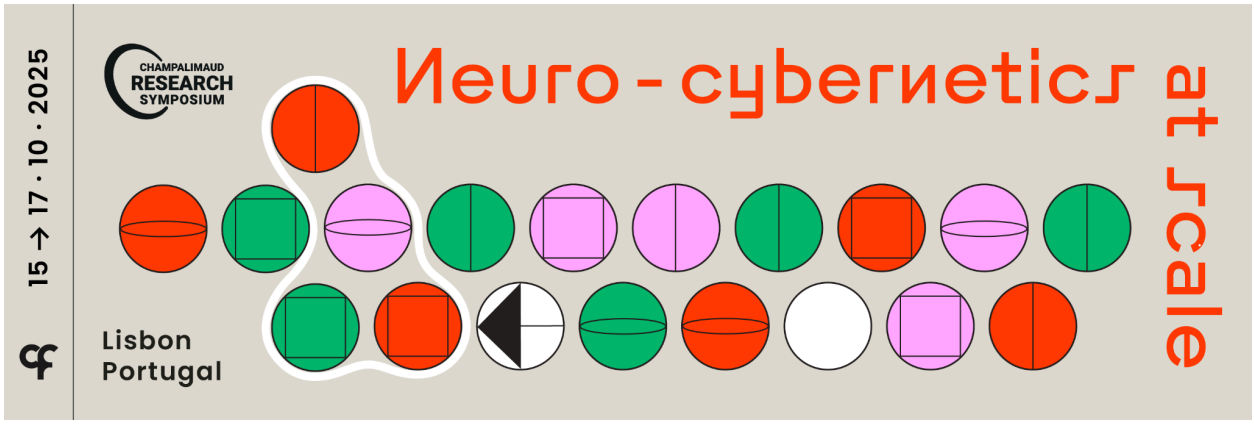

Architecture as Neuro-Cybernetic Feedback: Designing Spaces That Regulate the Human Nervous System

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As environments become increasingly dense, artificial, and overstimulating, the built environment emerges as a key player in shaping cognitive and physiological health. This submission proposes a new design framework—architecture as a neuro-cybernetic feedback system—where space is intentionally designed to interact with the human nervous system. My work at AB+AC Architects focuses on immersive environments that act as therapeutic interfaces: regulating stress, supporting attention, and enhancing emotional states through sensory-driven design strategies. while this approach is not yet supported by empirical neuroscience data, it is grounded in interdisciplinary theory and practice, informed by principles from neuroarchitecture, psychology of space, ecopsychology, and integrative medicine.

Projects like “The Luxury of Less” (dubai design week 2024) and “Back to the Future” (milan design week 2023) offer real-life case studies of multi-sensory spatial systems. These pavilions combine materiality, light, acoustics, and scale to influence neurophysiological response and invite calm, introspection, and affective presence. Although current evidence is anecdotal, the aim of this presentation is to frame future research collaborations with neuroscience labs to develop data-informed spatial prototypes using tools such as EEG, biosensing, and environmental biometrics.

This proposal invites discussion on the future of built environments not only as structures but as dynamic regulatory systems—interfaces that harmonize with the nervous system and influence behavior, healthspan, and well-being. It is a call for interdisciplinary partnership across architecture, neuroscience, and systems thinking to prototype responsive spaces for the next era of human-centered design.

neuroarchitecture, psychology of spaces, environmental homeostasis, holistic well-being, spatial cognition