URBAN ASSEMBLAGE: THE CITY AS ARCHITECTURE, MEDIA, AI AND BIG DATA.

• Paper / Proposal Title:
Site-Responsive. Critical of the Interactive Environments.

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• Abstract (300 words):
This paper analyzes the emotive, perceptive and social effects of technology in the space dimension, referred simultaneously to design practices and those who live the experience.

Today, technological innovation and the built environment are so connected that they define and influence each other. The computer is becoming the city and the city is a navigable and information-rich communication interface, both physical and digital, seamlessly networked. This increasingly pervasive use of new technologies leads us, in design practice, to overcome typological and stylistic issues, consolidating the transition from aesthetic considerations of representation to issues of process and behaviour.

Architectural design integrates and offers new forms of spatial interaction in which the datasets of the digital world become engines of buildings and interactive environments. "Interactive architectural environments are built upon the convergence of embedded computation and a physical counterpart that satisfies adaptation within the framework
of interaction” (Fox, 2016). This vital ability requires a level of phenomenological and
design complexity based on the logic of variation and correlation that can offer
simultaneous and dynamic spatial and communicative situations. In this regard,
parametric design tools based on associative rules “that inform all forms on the basis of
informational transcoding imply the possibility of information retrieval through the user, as
long as human cognitive capacities are reflected” (Schumacher, 2012).

Supporting the profound connection of motion to perceptive comprehension – “we are
organisms within environments that continuously evolve and self-organize and
relationships between mind, body and matter configures our cognitive understanding of
the world” (Mallgrave, 2015) – this paper examines the applications of interactive
architecture that incorporate the educational and communicative component into
kinaesthetic learning experiences. An opportunity to reflect on the future of exhibition
spaces and also on the meaning of our social nature and the mutable relationship with
the world mediated by technology.

• Author(s) Biography (200 words each):

Giovanna Nichilò (1990, Italy). She is an architect and exhibition designer. Master’s
Degree in Architecture at the University of Campania “Luigi Vanvitelli”. Postgraduate
specialization in Fair Architecture and Exhibit Spaces. Research Fellow in Industry 4.0
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Museum Design at Laboratory of Ergonomics & Design (LED) at the University of Florence.
Her professional experience includes work in Exhibition Design for scientific museums, fairs
and events; Interior Design for living spaces, retail and food-retail; Creative Industry;
Digital Fabrication and Design of teaching activities for STEAM matters. Since 2020 she is
a Ph. D. student in Science of Design at Iuav University of Venice and investigates aspects
of space-user interaction in Exhibition Design with a focus on responsive and interactive
architecture applications.

Gabriele Pontillo was born in Torre del Greco (Italy) on 7 October 1983. He is a Product
Designer, graduated in Design for Innovation at the University of Campania "Luigi
Vanvitelli". Since 2019 he has been a PhD student in Environment, Design and Innovation
at the Department of Engineering of the University of Campania "Luigi Vanvitelli". The
focus of his research line is parametric design, medical design, digital manufacturing and
innovative materials - knowledge acquired during his academic, research and working
career. The PhD with industrial characterization allowed him to consolidate his research
activity, not only at his University of reference, but also at a company in Campania,
based in Gricignano di Aversa. During the epidemic emergency caused by Coronavirus,
at Officina Vanvitelli, an advanced training laboratory of the University of Campania “L.
Vanvitelli, he collaborated in the creation of PPE using additive technology, which the University donated to hospital facilities.