

MATERIAL AGENCY

4D PRINTING

"Materials are the new software", *Neri Oxman*, 2010

Materiality of architecture is no longer seen as a fixed property and a passive receptor of digitally derived forms; the flexible nature of advanced manufacturing technology is more than just an enabler of formal complexity. In the "age of entanglement" the multidisciplinary, or better, antisciplinary approach, breaks the boundaries between disciplines. Through material engineering we have the possibility to understand and know the genotypic genetic heritage of materials and through computational design we can embed data in material systems as phenotypes. Programmable matter can offer a new paradigm for construction and our approach is based on material as active generator of architectural design. The phenomenological taxonomy stems from the integrated (material - machine - human - environment) system. 4D printing is the tool that exploits materials whose properties can be programmed through the implementation of algorithms simulating and reproducing behavioural patterns and parameters related to the morphogenetic process. Material agency seeks to investigate design strategies exploring the symbiotic relationship between material engineering, computational design and digital fabrication.



SCIENTIFIC COORDINATOR

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PROJECTS

4D printing of hydrogels / Tension-active textile structures
/ 4D printing technology for adaptive shading applications



PARTNERS AND SPONSORS

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