A methodological study of environmental simulation in architecture and engineering. Integrating daylight and thermal performance across the urban and building scales - DTU Orbit (17/01/2019)

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This study presents a methodological and conceptual framework that allows for the integration and creation of knowledge across professional borders in the field of environmental simulation. The framework has been developed on the basis of interviews with leading international practitioners, key theories of environmental performance in architecture and engineering, and a range of simulation experiments by the authors. The framework is an open structure, which can continuously be renewed and contributed to by any author. The value of the framework is demonstrated, using it to map a series of simulation studies, emphasizing the multidimensionality of environmental performance optimization. Clarifying the conceptual interconnectivity between architecture and engineering, agency and physics, not only enhances communicative power and the dissemination of knowledge, but becomes instrumental in pointing out the need for improving metrics, software and not least the performance of the built environment itself.

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