

International Conference on Sustainability in Energy and Buildings

Invited Sessions

Title of Session:

Digital Architecture for Sustainable Built Environment

Name of Chair:

Jon Moorhouse

Description:

Digital architecture is a field that is rapidly evolving and developing from Building Information Modelling (BIM) whereby techniques applied to digitise analogue processes give way to new innovations in design, communication, analysis and control. The concept of the Building Information Model is translated to the notion of the 'Digital Twin' thence opening up a distinctly AEC artefact to a much more universal set of research fields. This track explores new innovations in digital architecture, digital urbanism and data representation, from the micro to macro level, with an intention to externalise new practice. In particular, but not exclusively, some of the areas may include: Algorithmic Design; Energy Modelling in early-stage building design; Reduction in construction waste and improvements in lean construction approaches using digital communication; Bespoke and Small batch design using economies of scale; Diagnostic and prescriptive detailing approaches to retrofit design; biosphere housing design; design for cradle to cradle material and energy usage in buildings; balanced use of resources across urban areas; digital twin modelling and avatar use for facilities management across scalable environments; Digital twin city and infrastructure modelling; Layered data environments in city models.

This track thence aims to bring together best practice in sustainable digital design within the built environment, focusing in scale from the micro level of design of building components and systems through to the understanding and management of cities and larger urban conurbations. In this way it will be possible to not only showcase cutting edge practice and research in the above-mentioned fields, but also to explore potential crossovers and collaborations to push the agenda of sustainable living through digital workflow, control and response.

Website URL (if any):

www.constructivethinking.co.uk

Email & Contact Details:

Chair:

Jon Moorhouse

University/Practice, UK

email Jon@constructivethinking.co.uk jon.moorhouse@liverpool.ac.uk

Co-Chaired by Herbert Peter (artuum, Vienna, Austria), Marin Račić (3Dart, Rijeka, Croatia)