SBE19 Graz

SUSTAINABLE BUILT ENVIRONMENT D-A-CH CONFERENCE 2019
Graz, 11–14 September 2019

SPECIAL SESSION

Building Optimization Workflows

Martin Röck, Graz University of Technology, Austria; Alexander Hollberg, ETH Zürich, Switzerland; Benedek Kiss, Budapest University of Technoloogy and Economics, Hungary
12 Sept 2019, 02.15pm-03.45pm | Rechbauerstraße 12, 8010 Graz

SUSTAINABLE BUILT ENVIRONMENT D-A-CH CONFERENCE 2019

The SUSTAINABLE BUILT ENVIRONMENT D-A-CH CONFERENCE 2019 is part of a major international series of conferences that focus on sustainable buildings and construction. This series, now on a three-year cycle, has become recognized as the world's preeminent conference series in this important field. Graz University of Technology will host the SBE19 in co-operation with University of Natural Resources and Life Sciences, Vienna, Karlsruhe Institute of Technology and ETH Zürich. Within this conference several Special Sessions are organized.

KEYWORDS AND OBJECTIVE OF THIS SPECIAL SESSION

Optimization, Simulation, Parametric design, BIM, Integration, LCA, AI

As the imperative for reducing the carbon intensity of building construction and operation is tightening up it is becoming increasingly important to implement the envisioned reductions and improvements in the building design process. With ever more powerful digital design tools at hand a multitude of design problems can be addressed in order to improve buildings life cycle performance. Technological frameworks like Building Information Modelling (BIM) provide the potential to assess and improve buildings based on a variety of parameters. Furthermore, the rise and application of Artificial Intelligence for the matter of optimizing building design provides further potential for automated design exploration.

This Session aims to showcase and discuss design-integrated building assessment and optimization workflows. In view of improving life cycle performance the session welcomes contributions on the integration of Life Cycle Assessment (LCA) in the design process. Furthermore, we welcome contributions ranging from e.g. optimization of building shape and orientation, construction materials, simulation of energy consumption and potentials for on-site production as well as optimization of floor plan layouts. All assessment and optimization workflows presented shall contribute one way or the other to transforming to a Net Zero Carbon built environment.

Contact: Graz University of Technology, Austria | Institute of Technology and Testing of Building Materials | Working Group Sustainable Construction
Waagner-Biro-Straße 100, 8020 Graz | SBE19 Graz Secretariat: sbe19@tugraz.at | > **sbe19.tugraz.at**

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