Axiomatic Design for Interdisciplinary and Sustainable Building Design

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Abstract

Nowadays stakeholders in the building sector deal with complexities in the planning and design processes that are increasing. In addition, in building design the creative process often must provide solutions for ill-defined and incomplete problem requirements. Designers are not always able to make well-informed decisions, especially in complex design processes. Moreover, building planning is not integrated with production and construction, which leads to a lack of efficiency in the building realization. The causes of the unresolved issues are closely linked with a lack of tools to support effective knowledge integration. Specific advanced design tools are especially required to optimize the building design process regarding the various aspects of sustainability in order to satisfy the increasing demands for sustainable buildings. Axiomatic Design is particularly suitable for solving design problems, addressing how to handle cross-issues, and defining design goals in complex systems/processes.

The proposed tutorial intends to introduce and to explain a new approach to building design using Axiomatic Design. An interactive workshop will involve all participants (min. 6 – max. 20) to apply a rational and systematic interdisciplinary approach to a complex system, like the building sector, in order to improve the overall sustainability of the process. This tutorial is intended for everyone. A specific background is not required, only a basic knowledge of Axiomatic Design and of building processes.

Target Audience

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