



Session

Automated Processes for Monitoring and Management of Historical Buildings

Chairpersons:

Claudiu Silvestru (iC consulenten Ziviltechniker GesmbH / ICOMOS Austria) - Austria

Marija Nakeva (ICOMOS Austria) - Austria

Anna Geiger (iC consulenten Ziviltechniker GesmbH) - Austria

Description and Motivation:

Over the past years interconnected systems for analysis, planning and management of building processes such as BPS (Building Performance Simulation), BIM (Building Information Modelling) and CMDB (Configuration Management Database) have implemented different standards in the AEC industry (Architecture Engineering Construction). The respective tools are applied by asset managers, building surveyors, planners, constructors, real estate developers and facility managers on projects of all scales for existing buildings, new constructions and refurbishment. However the promise of increased efficiency for monitoring and management over the whole lifecycle of a building hasn't been yet fulfilled to the predicted extent - among others due to different approaches of both the user groups and the systems themselves.

Focusing on the longest section in the lifecycle of a building - the operational phase - the session at hand will address approaches to increase usability and economical sustainability of building data through automated linking of

different systems, approaches and specific requirements. We invite papers that contribute with insightful and controversial aspects regarding the research and implementation of automated processes for monitoring and management of historical buildings, including but not limited to:

- Methodologies for automated data conversion for specific post processing (e.g. Scan2BIM)
- Software innovations for increasing the efficiency of BIM for management of historical buildings
- Innovations in automated structural analysis and monitoring of historical buildings
- Integration of building pass and material pass data for an efficient circular economy
- Approaches on connecting automated data acquisition with Life Cycle Analysis and Life Cycle Costs
- Methodologies for Ensuring Long-Term Data Interoperability
- Approaches on automated performance analysis of historical buildings such as simulations on thermic behaviour, exposure and energy usage
- Data processing for preventive monitoring considering different types of risks (material decay, real estate pressure, cultural challenges etc.)

Target Audience:

- '- energy efficiency researchers
- real estate developers
- planners: architects, HVAC planners, building physics
- managers of heritage sites and FM-managers
- material scouts and urban miners

Keywords:

automatization, management, performance analysis, risk monitoring

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