



Adaptive Architecture: Designing for the Variable Environmental Conditions

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Message from the Guest Editors

Dear Colleagues,

This Special Issue is a great opportunity to publish innovative approaches and research results in the field of architecture, structural engineering, building constructions, building physics, etc. The term is similar to, and sometimes used interchangeably with, responsive architecture, although, adaptive architecture defines an automatic adaptation of the building exposed, and being able to react real-time to different physical influences. The adaptation to the external conditions include the following:

- Automatic shading of buildings and transparent structures against the sunlight effects.
- Shape adaptation of structural elements to the excessive noise load.
- Shape adaptation of the room based on the reverberation time (required for a particular type of musical activity).
- Adaptation of buildings and their structures to the changes in temperature, or humidity.
- Adaptive load-bearing building systems (rearrangement of internal forces under extreme load - fire, explosion).
- Adaptation to weather influences such as wind, rain, or snow, acting upon the building or its structural elements.





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