

Special session about Sustainable Architecture

within the “RILEM Spring Convention & Conference on durability of building materials and systems in the transportation infrastructure”

Title: How can we build sustainable architecture?

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This special session at the conference highlights methodologies crucial in fostering sustainable architecture within Architecture, Engineering, and Construction (AEC). The emphasis lies on material, digital technologies, and reuse methods that actively mitigate the environmental footprint in the AEC. The session has two themes:

- *Extending the life span of existing buildings and materials:* Research on digital design or fabrication strategies for the effective use of recovered or recycled building materials.
- *Alternative materials for new construction:* Advances in unconventional materials utilized by digital design and fabrication methods including optimization techniques to minimize material usage. Addressing challenges and capitalizing on opportunities in the industry, such as adapting to building codes, overcoming time constraints, and ensuring durability, thus contributes to integration of these new materials in AEC.

The session explores the implications, challenges, and opportunities of these novel approaches. The session will collect inputs that spark a significant change in how architects and engineers create buildings that are not just innovative but also eco-friendly, durable, innovative, and smartly built. This involves leveraging traditional and contemporary materials and construction methods that prove more environmentally sustainable.