

Special Issue

Tall buildings: Structural analysis, preliminary design and assessment of new and unconventional systems

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Specific areas covered by the Journal:

- Soft Computing Techniques in Structural Engineering and Materials;
- Structural design, diagnostics, and health monitoring.

Abstract:

With the continuous population growth on our planet, associated with the intense urbanization phenomenon, the need for new living and commercial spaces within the city claims for new and more rational solutions. To this purpose, tall buildings have been developed all around the world to address this problem. In the last decades, the analysis and design of tall buildings has experienced a remarkable development, leading architects and engineers to the realization of complex systems. Twisted, tapered, tilted and freeform towers have found increasing application. New structural solutions that include the use of outriggers, diagrids and hexagrids have also been used to increase the structural performance and the aesthetic potential of the building. This special issues aims at covering various aspects concerning the new trends in tall building analysis, design and assessment. In particular, theoretical, numerical and experimental studies are welcomed, which deal with the overall structural response as well as the behavior of new materials and technological solutions.