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Disciplina	693
Soggetti	Light construction Steel construction Lightweight construction Soft condensed matter Building materials Buildings - Design and construction Light-weight Construction, Steel and Timber Construction Soft Materials Structural Materials Building Construction and Design Building Materials
Lingua di pubblicazione	Inglese
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Nota di contenuto	Static- and fabrication-aware segmented concrete shells made of post-tensioned precast at tiles -- Isogeometric refinement for shape optimization with a tunable number of variables -- Snap'n'Roll: tuning and listening to the progressive buckling of reticulated ensembles -- Topology generation of architectural meshes adapted to the support conditions -- Form-Finding of Membrane Shells via Isogeometric Analysis -- Nervi's isostatic lines' inspired floor slabs. Beyond the archetypal Gatti Woolen Mill in Rome -- Grid-shell Multi-step Structural Optimization with Improved Multi-body Rope Approach and Multi-

objective Genetic Algorithm -- Free-form aluminum grid shell on bolted joints, Avenue Mall shopping center -- Snap-back analysis of fracture evolution in multi-cracked masonry arches -- Some latest research about the Messina Strait Bridge crossing -- The Role of Parametric Design in the Robotic Assembly of Dry-Constructed Shell Structures -- Reality based FE block models of masonry cross vaults: a real case study -- Internal force and moment surfaces for shells -- Steel frames optimization considering beam-column joint stiffness and geometric constraints -- Dynamic Analysis of Doubly-curved Shells Made of Advanced Materials with Higher Order Theories and Generalized Differential Quadrature.

Sommario/riassunto

This volume collects the latest advances, innovations, and applications in the field of shell and spatial structures, as presented by leading international researchers at the 2nd Italian Workshop on Shell and Spatial Structures (IWSS), held in Turin, Italy on June 26-28, 2023. The conference was meant to give an overview on experimental and theoretical studies, analysis methods and approaches for the design, computational form finding, structural optimization, manufacturing, testing and maintenance techniques and historical reviews of all types of shell and spatial structures. These include, but are not limited to, tension and membrane structures, framed and lattice structures, gridshells and active-bending structures, shell roofs, tensegrity structures, pneumatic and inflatable structures, active and deployable structures, concrete, metal, masonry, timber and bio-based, spatial structures. The contributions, which were selected by means of a rigorous international peer-review process, present a wealth of exciting ideas that will open novel research directions and foster multidisciplinary collaboration among different specialists.
