Form Transformation and Stress Control of Lightweight Flexible Structures

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The paper is the compilation of the original works of the applicant on the morphological and mechanical behavior of lightweight flexible structures. The works are on the

1. theoretical simplification and preparation of kinematics and mechanics,

2. theoretical preparation for positive use of large geometrical transformations

and

3. verification of these theoretical works through the applications to the real projects of lightweight flexible structures, such as membrane structures, tension structures, deployable structures and tensegrity skeletons.

White Rhino, Structural Design of the Tensegrity skeleton by Ken’ichi Kawaguchi, Architect Akira Fujii