

Approximating a Funicular Shape with a Translational Surface, Example of a Glass Canopy

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Abstract : This paper presents the method to generate the geometry of an actual glass canopy project in Rennes, France, by architect Bruno Gaudin, with aim to achieve the best structural efficiency possible using only quadrangle meshing. The paper includes equation of the translational surface generated, the level of accuracy in approximating the funicular shape and the method of constructive implementation.

Keywords : funicular shape, glass canopy, glass panels, lowered arches, mathematics, penalization, shell structure

Conference Title : ICSE 2014 : International Conference on Structural Engineering

Conference Location : Singapore, Singapore

Conference Dates : March 30-31, 2014