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Abstract
This paper regards the minimum weight problem of spatial systems, known in the literature as Rozvany–Prager archgrids. Their architectural role is to transmit a load of fixed intensity to the line of supports located at the boundary of a given plane domain. The system consists of arches spaced apart from one another, hence the mechanics of such a system is that of a gridwork shell and not a shell continuum.
Mathematically, description of an archgrid falls into the class of Michell frames. (...)