

# Dome and vault geometry in Persian architecture

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**Abstract** Domes are of the important elements in Persian architecture and were usually built over important spaces or in special buildings. The Three dimensional form distinguishes it from the city context and makes it a landmark in the landscape and silhouette of the city. Now the question is how this three dimensional form was designed in the past? What perception of geometry led to such delicate design of domes and vaults? This paper aims to answer these questions and demonstrate the role of theoretical and practical geometry in the design of domes and vaults. Hence focusing on manuscripts written by some Persian scientists the perceptions of our antecedents regarding the geometry of domes and vaults are deciphered to find out their methods and ways of using theoretical and practical geometry. In this paper the classification of domes and vaults in four groups by Jamshid Kashani is expanded to include some other types of domes and vaults.

**Keywords** traditional architecture, dome, vault, Persian architecture, geometry in architecture.

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