

## Microsymposium

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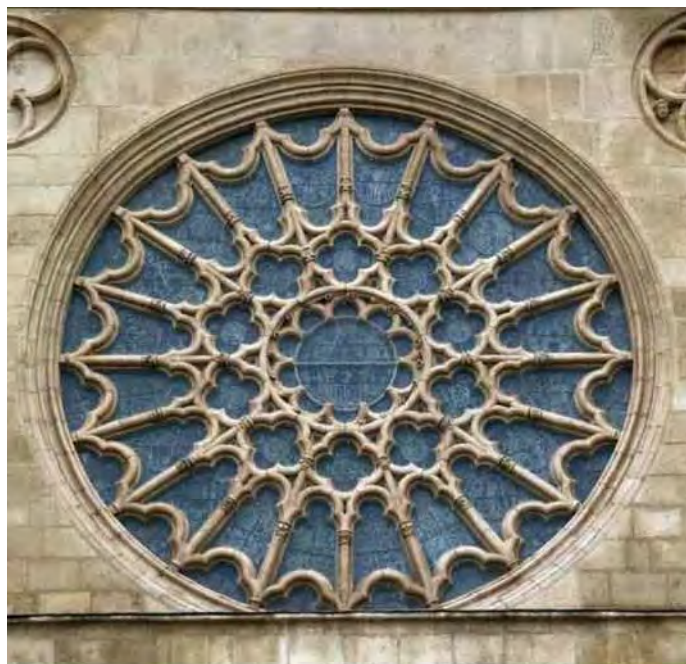
### *The Rose Windows of Gothic Cathedrals: Art, Symmetry and Beyond*

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The magnificent rose windows of the Gothic cathedrals have been the object of wonder and fascination to architects, artists and human beings alike, since they were used to emphasize the splendor of Gothic architecture, its lightness of forms and luminosity of interiors. There is considerable amount of literature on the theme including studies on the stone tracery and the stained glass, and a website created by a prominent author in the field ([www.therosewindow.com](http://www.therosewindow.com), [1]) is an excellent resource. A brief reference in the classic book *Symmetry* by H. Weyl [2] suggested that rose windows were indeed excellent examples of planar point group symmetry. However, a rigorous and systematic study of this particular facet of these masterpieces has never been done. Preliminary results of the frequency of different symmetrical arrangements for more than five hundred windows have been recently published [3] and will be presented. In addition, detailed analysis of certain examples of rose windows and iconic macromolecular structures suggest that various symmetrical figures and entities that are part of our world can have symbolic meaning. They can be described by the rigorous framework of group theory in mathematics but they have also been used through history to convey different thoughts, insights and perceptions of the artists (and scientists) as designers and executors of the cosmological view of the times. A project aimed at extending these studies in the future will be presented.

[1] P. Cowen (2005). *The Rose Window: Splendor and Symbol*. Thames and Hudson, New York, [2] Weyl, H. (1952). *Symmetry*. Princeton University Press, Princeton, [3] C. Abad-Zapatero, C. (2014). *Acta Crystallographica D*, in press



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