

STONY BROOK MATH CLUB TALK

Fractal Islamic Geometric Patterns Based on Arrangements of $n/2$ Stars

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Wednesday April 10th - 1:00PM - P-131 - Math Tower

Within traditional Islamic geometric design, there is a small but distinct subset of patterns which incorporate notions of self-similarity. Such patterns typically use exactly two levels of self-similarity, overlaid upon one another, with each level comprising similar motifs at two different, related scales. Recently I have constructed a large number of fractal Islamic patterns that pursue a different notion of self-similarity, simultaneously incorporating motifs at multiple often, infinitesimal scales within a single pattern. I will first highlight the ways in which these patterns are distinct in nature from related work, both traditional and contemporary. Then, I will explain the details of the technique I have devised for using patterns of $n/2$ stars as a basis for discovering and constructing a wide variety of new fractal Islamic patterns.

