

Starscapes and Schmidt Arrangements

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I will discuss two generalizations of the Farey tessellation (sort of like two shorter talks). The first is a generalization to algebraic integers of fixed degree. Here, generalization is used loosely, because we mainly study the structure of these sets of integers in a way that suggests generalization, without actually providing such generalizations. The second is a generalization to imaginary quadratic fields that is originally due to Asmus Schmidt, and which has connections to Apollonian circle packings. Both of these are very visual explorations, so the talk will have plenty of pretty pictures, hyperbolic geometry, and open questions.