Math 72: Topics in Geometry

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The general topic for the quarter will be 'billiards'. In particular, we will strive to understand Rich Schwartz's recent work on billiards inside obtuse triangles, and outside the Penrose kite. Rich's work solves two longstanding open problems, and perhaps more important, demonstrates a new, 21st-century approach to geometry. To see what this might mean, google Rich and check out McBilliards and BilliardKing.

For background and inspiration, we'll use Sergei (aka Serge) Tabachnikov's 'Geometry and Billiards': Go to amazon and Search Inside (TM), or download the preprint version from Sergei's website.

We will also explore related topics in geometry, according to the background and interests of course participants.

Participants will complete and present two independent projects of their own choice concerning any aspect of geometry. There will also be regular written assignments, and perhaps occasional quizzes. There will be no exams, but we'll use the regularly scheduled final exam period for presentation of final projects, so keep that time free.