

BI-CO MATHEMATICS COLLOQUIUM

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"In the Shadow of Desargues"

Monday, December 1, 2014

Talk at 4:00 – Park 338

Tea at 3:30 – Park 355, Math Lounge

Abstract:

Those of us who teach projective geometry often nod to perspective art as the spark from which projective geometry caught fire and grew. This talk looks directly at projective geometry as a tool to illuminate the workings of perspective artists. We will particularly shine the light on Desargues' triangle theorem (which says that any pair of triangles that is perspective from a point is perspective from a line), together with an even simpler theorem (you have to see it to believe it!). Given any convoluted, complicated polygonal object, these theorems allow us to draw that object together with something that is related to it – its shadow, reflection, or other rigid symmetries – and we'll show how this works. (If you enjoy doodling or sketching, bring your pencil, a good eraser, and a straightedge.)

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