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Tuesday, April 25th, 4:10 - 5:00 p.m.

In Surge 268

"Harmonic Functions on the Sierpinski Gasket"

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Fractal sets are sets that are self similar. In other words, fractals are sets that show the same pattern on multiple scales. These sets are very difficult to study using the usual math tools (derivatives, integrals, etc.). This means new tools and definitions need to be created. The theory of calculus on fractals stemmed from the desire to study differential equations and Laplacians on fractals. We will review the classic definition of harmonic functions and some basic results. We then look at the construction of "harmonic" functions on the Sierpinski gasket and discover some results analogous to those known for the familiar harmonic functions.