FROM TOWER OF HANOI TO SYZYGIES, A FRACTAL STORY

COLLOQUIUM SERIES

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THURSDAY, OCT. 20 – 4:30PM

WEXLER HALL - WXLR 21 (lower level)

Interesting mathematical objects tend to appear again and again in unexpected, and (seemingly) unrelated places. In this talk I will discuss one such object, the Sierpinski sieve. This simple construction has appeared in the study of games, number theory, fractal geometry, molecular systems, to name a few. Very recently, this pattern has resurfaced in my own research (with David Eisenbud) on syzygies. Syzygies are objects invented and utilized by David Hilbert in 1890 to understand complex systems of polynomial equations, and have played a big role in the development of modern algebraic geometry. It turned out that fractal structures can be exploited to build small sets of monomials with prescribed linear properties for their syzygies.

No prerequisite beyond high school algebra will be assumed from the audience.

ASU School of Mathematical and Statistical Sciences
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This event is free and open to the public.
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