

BI-CO MATHEMATICS COLLOQUIUM

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"Chip-firing on Graphs and Divisor Class Groups"

Simons Senior Thesis Colloquium

Monday, April 24, 2017

Talk at 4:00 – H108

Tea at 3:30 – KINSC Math Lounge, H208

Abstract:

I will present a game played on finite graphs with intricate combinatorial properties. It goes by many names, including chip-firing, abelian sandpiles, critical groups, graph jacobians, and component groups of Neron models, and appears in a variety of contexts all over mathematics. After exploring its basic structure, I will highlight analogies and direct relations to divisor class groups of curves and number fields, with particular attention to jacobians of random graphs.

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