

PHYSICAL MATHEMATICS SEMINAR

The mathematics of burger flipping

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ABSTRACT:

Ever since the dawn of time people have (literally) asked the question -- what is the most effective way to grill food? Timing is everything, since only one surface is exposed to heat at a given time. Should we flip only once, or many times? I will show a simple model of cooking by flipping, and some interesting mathematics will emerge. The rate of cooking depends on the spectrum of a linear operator, and on the fixed point of a map. If the system is symmetric, the rate of cooking becomes independent of the sequence of flips, as long as the last point to be cooked is the midpoint. This toy problem has some characteristics reminiscent of more realistic scenarios, such as thermal convection and heat exchangers.

TUESDAY, OCTOBER 18, 2022

2:30 PM – 3:30 PM

Building 2, Room 449

<http://math.mit.edu/seminars/pms/>