

PHYSICAL MATHEMATICS SEMINAR

Detailed model of forced bouncing drops

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ABSTRACT:

Drops are known to bounce indefinitely on a vertically oscillated liquid reservoir. In a narrow parameter regime, such drops may also travel horizontally. This system exhibits wave-particle duality, as the behavior of the bouncing drop is influenced by the underlying wave it generates. We propose a detailed model to describe this deterministic system, including interactions between drops and boundaries. We focus on the vertical dynamics of this system, and present extensions of the model to horizontal dynamics. We also describe how the model can be applied in higher and lower dimensions, as well as in complex geometries.

TUESDAY, APRIL 14, 2015

2:30 PM

Building E18, Room 466A

*Reception following in Building E17, Room 401A
(Math Dept. Common Room)*

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



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