

# COLLOQUIUM

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**11-6-14**

NECKERS 156 | 3PM

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## A 2-BALL BILLIARD DYNAMICAL SYSTEM COUNTS ALL DIGITS OF $\pi$

### [ABSTRACT]

In my talk I will tell how two massive colliding billiard particles (point-like balls) count all the decimal digits of the number  $\pi$ . While the formulation of the main theorem does not require any mathematics at all, its proof is subtle and tricky: it uses some knowledge from mechanics, geometry, and calculus.

If the time allows, I will tell in the end of my talk two problems on billiards posed by the prominent mathematician Ya. G. Sinai that were solved just recently. (Ya. G. Sinai won the most prestigious award in mathematics, The Abel Prize, in May 2014.)

The preliminary knowledge is not required. All interested in physics and mathematics are invited to the lecture, especially students of mathematics and physics majors.