Seminar/Talk

Periodic Lorentz gas with small scatterers

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Host: Kaloshin Group

The planar periodic Lorentz gas describes the motion of a billiard particle in a periodic arrangement of convex scatterers. The case of infinite horizon -- when the flight time between consecutive collisions is unbounded -- is a popular model of anomalous diffusion. For fixed scatterer size, Sz\asz and Varj\u proved a limit theorem for the displacement of the particle with a non-standard $\sqrt{n \log n}$ scaling. In my talk I would like to describe the asymptotics of this limit law in a setting when as time n tends to infinity, the scatterer size may also tend to zero simultaneously at a sufficiently slow pace. This is joint work with Henk Bruin and Dalia Terhesiu.

Monday, April 25, 2022 02:00pm - 03:00pm
Mondi Seminar Room 2, Central Building

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