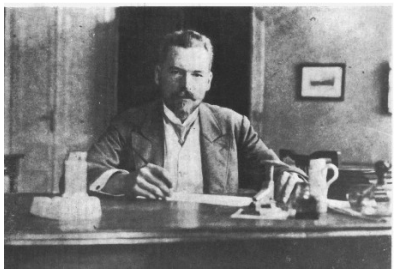

Contribution ID: **49** Type: **Invited talk**

Colossal Brownian, yet non-Gaussian diffusion in a periodic potential

Wednesday, 29 September 2021 12:30 (30 minutes)

I will report on a novel class of Brownian, yet non-Gaussian diffusion, in which the mean square displacement of the particle grows linearly with time, the probability density for the particle spreading is Gaussian like, but the probability distribution for its position increments possesses an exponentially decaying tail. In contrast to recent works in this area, this behavior is not a consequence of either a space- or time-dependent diffusivity, but is induced by external non-thermal noise acting on the particle dwelling in a periodic potential. The exponential tail in the increment statistics leads to colossal enhancement of diffusion, drastically surpassing the previously researched situation known as “giant” diffusion.

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