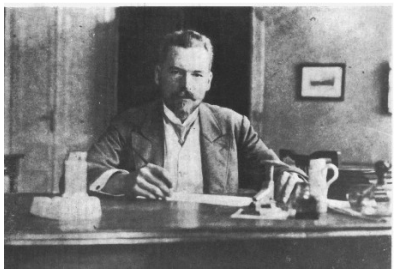

Contribution ID: **2** Type: **Talk**

Lévy flights in steep potential wells: Langevin modeling versus direct reponse to energy landscapes

Friday, 20 September 2019 10:00 (20 minutes)

The Eliazar-Klafter targeted stochasticity concept , together and that of the reverse engineering (reconstruction of the stochastic process once a target pdf is a priori given), has been originally devised for Lévy-driven Langevin systems. Its generalization, discussed in [PRE 84, 011142, (2011)], involves a non-Langevin alternative which associates with the sam Levy driver and the same target pdf, another (Feynman-Kac formula related) confinement mechanism for Lévy flights, based on a direct reponse to energy (potential) landscapes, instead of that to conservative forces. We revisit the problem of Lévy motion in steep potential wells, addressed in [A.A. Kharcheva et al., J. Stat Mech., (2016), 054029] and [B. Dybiec et al. , PRE 95, 05201, (2017)] and discuss the alternative semigroup (Feynman-Kac) motion scenario. Our focus is on a link with the problem of boundary data (Dirichlet versus Neumann, or absorbing versus reflecting) for the Lévy motion and its generator on the interval (or bounded domain, in general).

Summary

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