Seminar/Talk

Localisation of a random walk in dimensions $d \ge 3$

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We study a self-attractive random walk such that each trajectory of length N is penalized by a factor proportional to $\exp(−|R_N |)$, where R_N is the set of sites visited by the walk. We show that the range of such a walk is close to a solid Euclidean ball of radius approximately $\rho_d N^{1/(d+2) }$, for some explicit constant $\rho_d >0$. This proves a conjecture of Bolthausen (1994) who obtained this result in the case d = 2. Joint work with Raphael Cerf (Paris).

Friday, March 6, 2020 02:00pm - 02:50pm
Rényi Institute, Budapest

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