

STATISTICAL PHYSICS SEMINAR

April 17th, 2019.
Wednesday, 11.00

ELTE TTK Northern Building 2.54

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Analytical description of amorphous solid structures

Recent experimental, computational and theoretical results suggest a strong link between amorphous precursor mediated crystal nucleation and the glass transition. The first step in exploring this link is the analytical description of bulk amorphous structures. Recent numerical results suggest, that this should be possible in the framework of continuum theories providing unstructured solutions (these represent the amorphous phase). I will show, that the associated energy density functionals might have continuum infinitely many extrema in the infinite volume limit. These extrema can be generated according to a continuous probability measure, yet representing a unique energy density. The key to a stochastic solution of a deterministic PDE is Isserlis' Theorem, that guarantees the convergence of the energy density in the infinite volume limit for coloured Gaussian noise.

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Room 2.54

<http://glu.elte.hu/~statfiz/index.html>