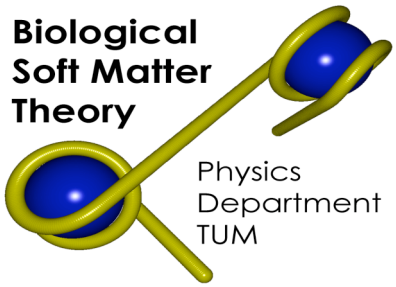

"Bio-Soft Sonderseminar"

"Transport in heterogeneous materials"

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Abstract:

For percolating systems, we propose a universal exponent relation connecting the leading corrections to scaling of the cluster size distribution with the dynamic corrections to the asymptotic transport behaviour at criticality. Our derivation is based on a cluster-resolved scaling theory unifying the scaling of both the cluster size distribution and the dynamics of a random walker. We corroborate our theoretical approach by extensive simulations for a site percolating square lattice and numerically determine both the static and dynamic correction exponents.
The talk introduces all necessary notions of percolation theory and transport in such systems, so it is suited for non-physicists also.

Dienstag, den 28.7.2009
15:00 Uhr
Raum PH 3344

Prof. Dr. Roland Netz
Physics Department T 37, Technical University Munich, Theoretical Physics
85747 Garching