Chez Pierre

Presents …

Special Chez Pierre Seminar

Anton Akhmerov – Delft University of Technology

"Tailoring new critical points on fractals"

The single-parameter scaling theory of localization describes the behavior of disordered systems in integer dimensions and predicts the existence of repulsive metal-insulator critical point in two dimensions in presence of weak antilocalization. I will show that fractals allow to continuously tune the dimensionality Anderson localization transition. This allows to create a new, attractive critical point of the scaling flow of conductance by continuously tuning the fractal dimensions. Unlike the regular metal-insulator transition, this attractive fixed point may only appear in fractal dimensions.