

Unique continuation principle and its absence on continuum and discrete geometries

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A powerful tool in the analysis of solutions of partial differential equations are unique continuation principles. Quantitative versions play an important role in inverse problems, uniqueness theorems for linear and non-linear differential equations, and in the theory of random Schroedinger operators. On the contrary quantum graphs violate the continuation principle, giving rise to new phenomena. Certain graph Laplacians exhibit similar features.