Stochastic completeness and uniqueness class for graphs

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Uniqueness class for the heat equation on a weighted graph is closely related to stochastic completeness of the corresponding minimal continuous time random walk. For a class of so called globally local graphs, we obtain essentially sharp criteria which are in the same form as for manifolds. Sharp volume growth type criteria for stochastic completeness then follow, after a reduction to the globally local case.

This talk is based on joint work with M. Keller and M. Schmidt.