## Integrable theory of quantum transport in chaotic cavities

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In this talk, I will show that the paradigmatic problem of conductance fluctuations in chaotic cavities with broken time-reversal symmetry is completely integrable in the universal transport regime. This observation will be utilised to prove that the cumulant generating function of the Landauer conductance in the cavities probed via ballistic point contacts is given by the fifth Painlev transcendent. If time permits, a closely related integrable theory of the noise power fluctuations in the crossover regime between thermal and shot noise will also be outlined.