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Quantum Curves and Topological Recursion

In a wide range of enumerative geometric problems involving the moduli space of Riemann surfaces, the genus zero invariants are encapsulated into a complex curve known as the spectral curve of the problem. The higher genus invariants can then be recovered in two different ways; either through the topological recursion first proposed by Eynard and Orantin, or through the existence of a rather mysterious and generally conjectural object, the "quantum spectral curve". In this talk I will explain how the two ideas are related, and show that for a certain family of spectral curves the topological recursion implies the existence of a quantum curve.