Contribution Title:	COUNTING NODAL DOMAINS ON QUANTUM GRAPHS
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YRS seminar:	YES

The investigation of nodal domains on manifolds has began already in the 19th century by the pioneering work of Chladni on the nodal structures of vibrating plates. Counting nodal domains started with Sturm's oscillation theorem which states that a vibrating string is divided into exactly n nodal intervals by the zeros of its nth vibrational mode. A quantum graph can be thought of as a structure of strings which are attached to each other. For a given quantum graph the nodal sequence is the sequence of numbers of nodal domains of its vibrational modes ordered by their frequencies. Many recent works treated the bounds and the statistics of the nodal sequences both for graphs and for manifolds. Nevertheless, an exact formula for the nodal sequence is still not available. We show the existence of a formula for a specific quantum graph and offer an approach which might yield nodal count formulae for quantum graphs. Such a formula would help in answering the inverse question regarding the geometrical information that is stored in the nodal sequence. This is a joint work with Gregory Berkolaiko and Uzy Smilansky.