

# Recovering matching conditions for star graphs

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I will talk about the inverse problem for the Schrödinger operator on a star graph. It is proven that such Schrödinger operator, i.e. the graph, the real potential on it and the matching conditions at the central vertex, can be reconstructed from the Titchmarsh-Weyl matrix function associated with the graph boundary. I will show that the reconstruction is also unique if the spectral data include not the whole Titchmarsh-Weyl function but its principal block.

The talk is based on a joint work with S. Avdonin and P. Kurasov.