

Controlling quantum systems by their boundaries

Monday, June 26, 2023 3:00 PM (1 hour)

On this talk, the possibility of controlling quantum systems by means of boundary conditions will be addressed. We will present the problem of controlling the pure state of a quantum particle via boundary conditions using two examples: the case of a circuit-like space and the case of a potential well with moving walls. For the first case, we show approximate controllability using as space of controls a family of boundary conditions which are a generalisation of quasi-delta vertex conditions on Quantum Graphs. On the second case, we show controllability using as controls the movement of one or both of the well's walls.

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