Increasing Stability in the Linearized Inverse Schrödinger Potential Problems

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Inverse Schrödinger potential problem concerns about the recovery of a potential function in the Schrödinger equation in a bounded domain through the DtN map. In this talk, we introduce the linearized DtN map, and prove a stability estimate with explicit dependence on wavenumbers. This is an increasing stability result, in the sense that the logarithmic stable term decays when wavenumber increases. The talk is based on joint works with Victor Isakov (Wichita), Mikko Salo (Jyvaskyla), Boxi Xu (SUFE) and Sen Zou (Fudan).