

## Existence of nonattainable states for Schrödinger type flows on the half space

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In this talk, we address the boundary controllability problem for the Schrödinger equation on the half space (1D and 2D). We also extend the discussion to biharmonic Schrödinger equation. For both equations, we prove existence of unattainable states with  $L^2$  type controls. Our method relies on recent developments in local wellposedness theory for initial boundary value problems for these equations ([1]-[4]). The noncontrollability results obtained here contrast with the dynamics in the case of bounded domains where controllability property holds true ([5]).

### References

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