The talk will cover these ongoing research projects

- Investigation of the stability of many-body localization coupled to a small bath with respect to the coupling strength.
- Investigation of the stability of many-body localization coupled to a small bath with respect to the bath size.

These projects are supported by PRACE, thanks to the 20.000.000 core hours on Joliot-Curie Rome we were awarded in the 23rd call for PRACE project access (ID: 2021240003).

The contribution will also summarize the research currently under review that can be found in the following two preprints:

- arXiv:2111.08603
- arXiv:2109.07332

Our research is supported by the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (Grant Agreement No. 850899).