

Quantum dissipation in one dimensional systems and Thierry's "Magic Touch"

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I will review several old and new results concerning one-dimensional quantum dissipative systems whose understanding greatly benefited from my interactions and collaboration with Thierry and Thierry's former collaborators over the years. Beginning with a brief review of some early studies on the effect of dissipation in Tomonaga-Luttinger liquids [1,2] and spin systems [3,4], I will conclude by describing some recent results [5] about the non-equilibrium dynamics induced by two-body losses of strongly interacting bosons in one-dimensional optical lattices. Along the way, some open problems will be also discussed.

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[2] E. Malatsetxebarria, Z. Cai, U. Schollwöck, and MAC, *Phys. Rev. A* **88**, 063630 (2013).

[3] A. M. Lobos, MAC, and P. Chudzinski, *Phys.Rev. B* **86** 035455 (2012).

[4] A. M. Lobos and MAC, *J. Phys: Cond. Mat.* **25**, 094008 (2013).

[5] C.-H. Huang, T. Giamarchi, and MAC, *Phys. Rev. Res.* **5**, 043192 (2023).