Abstract for GR-TR Conference on Statistical Mechanics and Dynamical Systems

Talk Invited Invited Talk

Open issues on the transport of 1D quantum systems

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I will discuss recent theoretical developments on the dynamics of one dimensional quantum systems[1]. In particular, I will focus on open issues and controversial results related to the finite temperature transport of integrable models[2]. These singular systems are commonly used in the description of quasi-one dimensional materials. They are recently attracting interest in connection to experiments, following the discovery of unusual thermal conductivity in quasi-1D magnetic materials[3].

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[1] X. Zotos, *J. Phys. Soc. Jpn.* **74**, 173 (2005).

[2] X. Zotos, F. Naef and P. Prelovšek, *Phys. Rev.* **B55**, 11029 (1997).

[3] C. Hess, *Eur. Phys. J. Special Topics* **151**, 73 (2007).