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An information-theoretic view on thermalization

Renato Renner *
renner@phys.ethz.ch

How can the reversible dynamics of physical processes give rise to irreversible phenomena such as thermalization? I will reconsider this old question using modern tools from quantum information theory. In particular, I will show how recently developed techniques, such as the decoupling approach to quantum information, allow us to make quantitative statements about the thermalization properties of physical systems.

*Institut f. Theoretische Physik, ETH Zürich, Wolfgang-Pauli-Str. 27, 8093 Zürich, SWITZERLAND.