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Dynamical symmetries in ageing phenomena

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Systems undergoing physical ageing can be characterised by (i) undergoing slow relaxation (ii) absence of time-translation-invariance and (iii) dynamical scaling. Specific examples are obtained by quenching many-body systems from a high-temperature initial state to below their critical temperature. Here, we shall consider consequences of an assumed extension of dynamical scaling to a larger group of *local scale-transformations*. Explicit scaling forms of two-time responses and correlators are obtained. These will be compared with simulational data in simple magnets, as well as in many-body systems without an equilibrium stationary state, such as critical directed percolation or domain-growth in the Kardar-Parisi-Zhang universality class.

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- [2] M. Henkel, J.D. Noh, M. Pleimling, Phys. Rev. **E85**, 030102(R) (2012) [[arxiv:1109.5022](#)]
- [3] M. Henkel, [arxiv:1009.4139](#)
- [4] M. Henkel, S. Stoimenov, Nucl. Phys. **B847** [FS], 612 (2011) [[arxiv:1011.6315](#)]