

## Selected publications

- 1) *Charge and vortex dynamics in arrays of tunnel junctions*, R. Fazio and G. Schoen, Phys. Rev. B **43**, 5307 (1991).
- 2) *Anomalous Thermal Transport in Quantum Wires*, R. Fazio, F.W. J. Hekking and D.E. Khmelnitskii, Phys. Rev. Lett. **80**, 5611 (1998).
- 3) *Detection of geometric phases in superconducting nanocircuits*, G. Falci, R. Fazio, G.M. Palma, J. Siewert, and V. Vedral, Nature **407**, 355 (2000)
- 4) *Scaling of entanglement close to a quantum phase transition*, A. Osterloh, L. Amico, G. Falci, and R. Fazio, Nature **416**, 608 (2002).
- 5) *Decoherence and  $1/f$  noise in superconducting qubits*, E. Paladino, L. Faoro, G. Falci, and R. Fazio, Phys. Rev. Lett. **88**, 228304 (2002).
- 6) *Entanglement in many-body systems*, L. Amico, R. Fazio, A. Osterloh, and V. Vedral, Rev. Mod. Phys. **80**, 517 (2008).
- 7) *The quantum optical Josephson interferometer*, D. Gerace, H.E. Tureci, A. Imamoglu, V. Giovannetti, and R. Fazio, Nature Physics **5**, 281 (2009).
- 8) *Dynamical Phase Transitions and Instabilities in Open Atomic Many-Body Systems*, S. Diehl, A. Tomadin, A. Micheli, R. Fazio, and P. Zoller, Phys. Rev. Lett. **105**, 015702 (2010).
- 9) *High-fidelity quantum driving*, M. G. Bason, M. Viteau, N. Malossi, P. Huillery, E. Arimondo, D. Ciampini, R. Fazio, V. Giovannetti, R. Mannella, and O. Morsch, Nature Physics **8**, 147 (2012).
- 10) *Extracting Quantum Work Statistics and Fluctuation Theorems by Single-Qubit Interferometry*, R. Dorner, S. R. Clark, L. Heaney, R. Fazio, J. Goold, and V. Vedral, Phys. Rev. Lett. **110**, 230601 (2013).
- 11) *Anderson localization of entangled photons in an integrated quantum walk*, A. Crespi, R. Osellame, R. Ramponi, V. Giovannetti, R. Fazio, L. Sansoni, F. De Nicola, F. Sciarrino, and P. Mataloni, Nature Photonics **7**, 322 (2013).
- 12) *Measures of Quantum Synchronization in Continuous Variable Systems*, A. Mari, A. Farace, N. Didier, V. Giovannetti, and R. Fazio, Phys. Rev. Lett. **111**, 103605 (2013)
- 13) *The power of a critical engine*, M. Campisi and R. Fazio, Nat. Comm. **7**, 11895 (2016).
- 14) *Cluster mean-field approach to the steady-state phase diagram of dissipative spin systems*, J. Jin, A. Biella, O. Viyuela, L. Mazza, J. Keeling, R. Fazio and D. Rossini, Phys. Rev. X **6**, 031011 (2016).
- 15) *Boundary time crystals*, F. Iemini, A. Russomanno, J. Keeling, M. Schirò, M. Dalmonte, R. Fazio, Phys. Rev. Lett. **121**, 035301 (2018).