

COST Action MP1209 "Thermodynamics in the Quantum Regime" Newsletter
Friday 14th November 2014

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Forthcoming Events

COSTMP1209 – The Second Quantum Thermodynamics Conference is being organised by Roberta Zambrini and will be held from 19-24 April 2015 in Palma de Mallorca, Spain, hosted by the Institute of Cross-Disciplinary Physics and Complex Systems [IFISC](http://ifisc.uib-csic.es), a joint research Institute of the University of Balearic Islands [UIB](http://uib.es) and the Spanish National Research Council [CSIC](http://csic.es). **The meeting website is now available -** <http://ifisc.uib-csic.es/qtd2/>

The 2nd Quantum Thermodynamics Conference is meant to be a reference for researchers working in thermodynamics in the quantum regime, in connection with quantum information theory and statistical physics. Two keynote (Martin Plenio and Peter Talkner), several invited and contributed talks as well as a poster section are scheduled, promoting young scientists. The conference also includes discussion time and Working Group meetings.

COST MP1209 Training School - "Physics of Small Quantum Systems: Thermal and Topological Phenomena" is being organized by Tero Heikkilä and will be held from 12-16 January 2015 in Gustavelund, Tuusula, Finland. The meeting website is <https://www.jyu.fi/fysiikka/en/qutschool2015> and registration is open. All the COST supported places for this School have now been allocated.

It is intended to be a graduate training school for physicists working on topological properties, and nonequilibrium and thermodynamic phenomena in small condensed-matter systems. Topics will include: Quantum thermodynamics, (circuit) optomechanics, topological superconductors, thermal effects in ultracold atom systems, and fast (radio frequency) measurements, including connections between these topics.

Workshop on Quantum Information and Thermodynamics

23-27 February 2015, Sao Paulo, Brazil

<http://wqit-quantum.if.ufg.br/>

Workshop on Thermodynamics and Nonlinear Dynamics in the Information Age

13-17 July 2015, Telluride, USA

<https://www.telluridescience.org/meetings/workshop-details?wid=548>

COSTMP1209 – Third Quantum Thermodynamics Conference "Quantum Thermodynamics, Quantum Information"

11-16 October 2015, Porquerolles, France

The meeting website will be available soon.

STSM Update

There has been a lot of interest during this second year of the network in STSMs.

To date we have allocated €13680 from a total budget of €19750. This has allowed us to approve 10 STSMs from the 14 applications we have received during Calls 5 & 6. Of these 10, 7 have successfully completed and the remaining 3 are all due to start in January 2015.

The next STSM call opens on 1st December and applications must be received by 17th December. Details can be found on the website - <http://qut.ethz.ch/stsm>. STSM applications are a competitive process so, if you are considering applying, please give yourself the best chance of success by ensuring your project description is as strong as possible.

Administrative Information

Please send any items for inclusion in the next newsletter to me - costmp1209@gmail.com.

COST Acknowledged Publications

The following COST acknowledged publications have been notified to us since the last newsletter. Please send details of any new COST acknowledged publications to costmp1209@gmail.com.

1. Rahav, S. & Harbola, U.
"An integral fluctuation theorem for systems with unidirectional transitions."
J. Stat. Mech. Theory Exp. **2014**, P10044 (2014).
2. Thingna, J., Hänggi, P., Fazio, R. & Campisi, M.
"Geometric quantum pumping in the presence of dissipation."
Phys. Rev. B **90**, 094517 (2014).

Kind regards,

Marion