

COST Action MP1209 “Thermodynamics in the Quantum Regime” Newsletter

Wednesday April 20th 2016

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COSTMP1209 – Budget Changes

The COST office has recently informed us, that the financial year-end for all COST Actions will move forward from 31st May to 30th April. This affects our Action COST MP1209 directly as our 4th Quantum Thermodynamics conference to be held in Erice, Italy in May will effectively move from year 3 to year 4 of the Action. As a result of this, there will be **severe delays in informing participants if they are eligible for COST funding and in their subsequent reimbursement.**

We apologise for the disruption and uncertainty that this is causing. We continue to be in regular communication with the COST office and we will update you on the situation as soon as possible.

COSTMP1209 – 6th Working Group Meeting

COSTMP1209 – The 6th Working Group Meeting <http://qutmalta.sciencesconf.org> was held between 21-24 February, Malta.

The meeting followed on from previous Working Group meetings and provided a bird’s eye view of the work achieved by this network and the major questions that still remain open. The meeting was extremely successful, informative and gave rise to valuable discussions together with interesting and engaging presentations.

We would like to thank André Xuereb, Lucienne May Bugeja, Jackson Levi Said, Alison Darmanin and the programme committee for all their hard work in ensuring the conference was successful.

Forthcoming Events in Year 4

COSTMP1209 – 4th Quantum Thermodynamics Conference

8-15 May 2016, Ettore Majorana Centre, Erice, Italy. Michele Campisi and his team are organising this event.

The 4th Quantum Thermodynamics conference covers the main topics of quantum thermodynamics. In particular, questions regarding the emergence of thermalisation in quantum systems, the interplay of information and thermodynamics in quantum systems and devices (e.g. quantum thermal engines), and experimental implementations.

The meeting website is <http://qtd4.sciencesconf.org>

Registration is now closed.

A limited number of participants will be funded by COST MP1209 to attend the event. Please remember to comment if you want to be considered for funding upon registration. **Please see comment above in 'COST MP1209-Budget Changes' regarding notification of COST funding.**

COSTMP1209 - Training School- Thermodynamics and non-equilibrium phenomena for quantum interfaces of light and matter.

19-24 September 2016, Istanbul, Turkey. <https://www.eventbrite.com/e/non-equilibrium-phenomena-at-quantum-interfaces-of-light-and-matter-registration-24297998969>.

COSTMP1209 - 5th Quantum Thermodynamic Conference

March 2017, Oxford, UK. This event will be organized by Luis Correa, Felix Binder, Fabio Anza, Pietro Liuzzo-Scorpo, Gerardo Adesso & Cormac Browne.

Quantum Manifesto

IMPORTANT - Reminder for the whole network (from Master students to Nobel laureates) to consider endorsing the Quantum Manifesto by **April 30th**.

The Quantum Manifesto, is an initiative to show that the scientific community strongly supports a large scale European flagship program of €1 billion over 10 years for quantum research. This is extremely important and we need to show the European decision makers how strong the support from the scientific community is.

Please go to <http://quope.eu/manifesto> for more information.

STSM Update

All calls for Year 3 of the Action have now been completed. Further details of any future calls can be found on the website <http://blogs.exeter.ac.uk/qut/>

Website

We are still experiencing technical difficulties with the 'join us' page. If you know of anyone wishing to join, please ask them to send their CV and general information direct to the Project Administrator Sandra Howsley at costmp1209@gmail.com.

Please be aware that the joining process can take up to 8 weeks due to the time constraints of those organizing this.

New Members

4 new members recently joined our network.

Administrative Information

Please send any items for inclusion in the next newsletter to 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. Kammerlander, P. & Anders, J. Coherence and measurement in quantum thermodynamics. *Sci. Rep.* **6**, 22174 (2016).
2. Liu, N. *et al.* Quantum thermodynamics for a model of an expanding Universe. *Class. Quantum Gravity* **33**, 035003 (2016).
3. Millen, J. & Xuereb, A. Perspective on quantum thermodynamics. *New J. Phys.* **18**, 011002 (2016).

REVIEW

James Millen & André Xuereb have written a review in the January edition of *Physics World* on the 'Rise of quantum machines'.