

This the official abstract template for QTD2019

B. Huard^a, J.P. Pekola^{b,c}, and M. Günes^{b,c}

^aLaboratoire de Physique, Ecole Normale Supérieure de Lyon, 69364 Lyon Cedex 7, France

^bQTF Centre of Excellence, Department of Applied Physics, Aalto University, 00076 Aalto, Finland

^cCentre for Quantum Engineering, Aalto University, 00076 Aalto, Finland

In recent years scientific interest has grown to understand the thermodynamics of nanoscale systems, where quantum fluctuations compete with classical fluctuations, and where the assumptions of standard thermodynamics, such as macroscopic ensembles, do not apply.¹ QTD2019 will bring together experts working on topics in quantum thermodynamics theory and experiments that explore this new frontier with low temperature electronic circuits, trapped ions, cavity optomechanics, cold gases, NV centres and other platforms. The conference gives the opportunity to discuss new results and establish new connections between the varied research directions in the field.

¹J. P. Pekola *Towards quantum thermodynamics in electronic circuits*, Nat. Phys. **11**, 118-123 (2015).