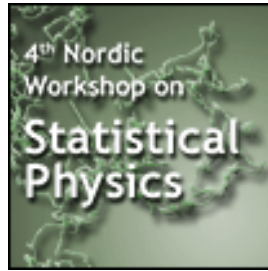


4th Nordic Workshop on Statistical Physics: Biological, Complex and Non-Equilibrium Systems



Contribution ID: 262

Type: **not specified**

The Maxwell Demon: A Personal View

Thursday, March 21, 2013 3:15 PM (1 hour)

Information can be used to extract energy from a single thermal bath, in apparent contradiction with the Second Law of Thermodynamics. This observation was first pointed out by Maxwell in 1867 with the introduction of his celebrated demon. Since then, the demon has inspired much research on the relationship between information and entropy, most of it focused on the thermodynamic cost of the acquisition and processing of information. In the last years, new tools for the study of the energetics of small fluctuating systems –the so-called fluctuation theorems– have provided a better understanding of the thermodynamics of information. In this seminar, I will review part of the history of the Maxwell demon, with special emphasis on these recent results, trying to give some clues to the fundamental question: what is information?

Presenter: Prof. PARRONDO, Juan (Universidad Complutense de Madrid)