

# Colloquium

Image Credit: NIST

## SPRING 2013

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## Quantum Thermodynamics:

## Can Maxwell's demon be actually an angel?

day

**MARCH 13, 2013 WEDNESDAY**

location

**EE01**

time

**16:00**

### ABSTRACT

Thermodynamics was discovered by engineers; had been evolved by physicists for a while, then was disbanded to engineers again. Physicists are like kids; they love to break things apart to comprehend them, such as symmetries, atoms, or classical limits. Thermodynamics sets a very strong limit that cannot be broken and many physicists abandon it as an incomprehensible relic. Once upon a time, a physicist summoned a demon to destroy this sacred relic, but failed. Many thought that the demon was exorcised. On the other hand, it was discovered recently that the demon is still hanging around; but converted by quantum mechanics to act angelically. Quantum mechanics deals with microscopic world while the thermodynamics is about macroscopic one. The last person who seem to understand the link between these two, killed himself as nobody believed him. This talk will try to make sense of all of these; and will attempt to convince the audience that quantum thermodynamics is as meaningful as jumbo shrimp.

The Physics Colloquia are designed to address a non-specialist, broad audience and introduce topics of contemporary research through lectures by leading experts. We warmly invite all members of the student body, including undergraduates enrolled in any programme.

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