



CERN Colloquium

SPEAKER: Sandu Popescu
TITLE: **The smallest possible thermal machines
and the foundations of thermodynamics**
DATE: 19 Apr 2018, 16:30
PLACE: 500-1-001 - Main Auditorium

ABSTRACT

In my talk I raise the question on the fundamental limits to the size of thermal machines – refrigerators, heat pumps and work producing engines - and I will present the smallest possible ones. I will then discuss the issue of a possible complementarity between size and efficiency and show that even the smallest machines could be maximally efficient and I will also present a new point of view over what is work and what do thermal machines actually do. Finally I will present a completely new approach to the foundations of thermodynamics that follows from these results.