Mathematical Methods for Ecology and Industrial Management

ICMAT
INSTITUTO DE CIENCIAS MATEMÁTICAS

Seminar
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ICMAT, Aula Gris II

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Thermodynamics of feedback controlled systems

Abstract: We will present recent results that connect Thermodynamics and Information Theory. These results show the role of information in the Thermodynamics of feedback systems. In particular, we discuss how the entropy reduction due to information can be computed for deterministic and non-deterministic systems. We will start recalling how the concept of entropy is introduced in Thermodynamics, Statistical Physics, and Information Theory. We will also discuss how these results are related to the Maxwell demon and the Landauer principle.