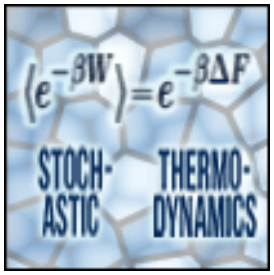

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Information motors vs chemical motors

Thursday, March 14, 2013 10:00 AM (1 hour)

To induce transport, detailed balance must be broken. A common mechanism is to bias the dynamics with a thermodynamic fuel, such as chemical energy. An intriguing, alternative strategy is for a Maxwell demon to effect the bias using information and feedback. In this seminar I will review the thermodynamics of information and present two systems, a chemical motor and an information motor, exhibiting the same dynamical behavior but with very different thermodynamical properties. The analysis of these motors elucidates the manner in which information is incorporated into a physical system.

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