

MAR12-2011-001573

Abstract for an Invited Paper  
for the MAR12 Meeting of  
the American Physical Society

**Dannie Heineman Prize for Mathematical Physics Lecture: Understanding Nonequilibrium via Rare Fluctuations**  
GIOVANNI JONA-LASINIO, Dipartimento di Fisica, Università di Roma “La Sapienza” and INFN, Roma, Italy

Irreversible processes are a hot subject in statistical mechanics. During the last decade through the effort of several people, including the recipient of the prize and his collaborators, a progress in understanding stationary nonequilibrium states has been achieved. The key has been the study of rare fluctuations. The talk will review some basic ideas, results and perspectives.