Thermodynamic reversibility in feedback processes[1] JORDAN
HOROWITZ, JUAN PARRONDO, Universidad Complutense de Madrid — The
information acquired during a thermodynamic process with feedback can be con-
verted into useful work. However, the second law of feedback restricts the amount
of useful work that can be obtained from this information. In this presentation, I
will discuss optimal thermodynamic processes with feedback, where all the informa-
tion is converted into work. Utilizing the detailed fluctuation theorem for feedback,
I will demonstrate that such processes are feedback-reversible: they are indistin-
guishable from their time-reversal, thereby extending the notion of thermodynamic
reversibility to feedback processes.

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