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Optimal scheduling and MHD equilibria

Abstract

The first part will be a rapid summary of our paper "Optimal scheduling in a periodic environment", Nonlinearity 13 (2000) 257-297, in which we extended Aubry-Mather theory to one-sided sequences of times, and deduced conclusions for some dynamic optimisation problems.

The second part will be an open-ended introduction to the question of formulating a variational principle for magneto-hydrodynamic equilibria in a sufficiently weak space to allow singular-continuous current distributions. This problem is fundamental to the success of the magnetically confined nuclear fusion programme.