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Invariant or quasi-invariant probability measures for infinite dimensional groups*

Part I: Non-ergodicity of Euler hydrodynamic

Paul Malliavin

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*To the Japanese Mathematical Community,
with my admiration and my warmest friendship.*

Abstract. Deterministic Euler flow on a torus cannot leave invariant any probability measure.

Keywords and phrases: group of diffeomorphisms, Malliavin calculus, random unitary operator, existence of Euler flow

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P. MALLIAVIN
10 rue Saint-Louis-en-l'Ile, 75004 Paris, France
(e-mail: `sli@ccr.jussieu.fr`)