

1030-37-237

Alistair Windsor* (awindsor@memphis.edu), 373 Dunn Hall, Mathematical Sciences, The University of Memphis, Memphis, TN 38152. *Livšic Theory for Cocycles taking Values in a Diffeomorphism Group.*

The classical Livšic theorem concerns cocycles over topologically transitive Anosov diffeomorphisms or flows. It says that if the cocycle has a Hölder generator and is sufficiently close to the identity then a necessary and sufficient condition for the cocycle to be cohomologous to the trivial cocycle is that the cocycle be trivial over every periodic orbit. We present a version of this theorem for cocycles taking values in the group of diffeomorphisms of a compact Riemannian manifold. This extends earlier work of Török and Nițică.

This is joint work with Rafael de la Llave (The University of Texas at Austin). (Received August 03, 2007)