

1077-37-1189

**Andrey Gogolev, Boris Kalinin\*** (kalinin@jaguar1.usouthal.edu) and **Victoria Sadovskaya**. *Local rigidity for Anosov automorphisms*.

We consider an irreducible Anosov automorphism  $L$  of a torus  $\mathbb{T}^d$  such that no three eigenvalues have the same modulus. We prove that  $L$  is locally rigid, that is,  $L$  is smoothly conjugate to any  $C^1$ -small perturbation  $f$  for which the derivatives of the return maps at the periodic points are conjugate to those of  $L$ . We show that toral automorphisms satisfying the above assumptions are generic in  $SL(d, \mathbb{Z})$ . (Received September 17, 2011)