## 1053-55-334 **Oleg R Musin\*** (oleg.musin@utb.edu), Dept. of Mathematics, UTB, 80 Fort Brown, Brownsville, TX. On rigid Hirzebruch genera.

The classical multiplicative (Hirzebruch) genera of manifolds have the wonderful property which is called rigidity. Rigidity of a genus h means that if a compact connected Lie group G acts on a manifold X, then the equivariant genus  $h^G(X)$ is independent on G, i.e.  $h^G(X) = h(X)$ . In this paper we are considering the rigidity problem for complex manifolds. In particular, we are proving that a genus is rigid if and only if it is a generalized Todd genus. (Received September 08, 2009)