1135-46-1930 **Don Hadwin**, **Qihui Li**, **Weihua Li*** (wli@colum.edu) and **Junhao Shen**. *Topological Orbit Dimension of MF C*-algebras.*

This paper is a continuation of our work on D. Voiculescu's topological free entropy dimension in unital C*-algebras. In this paper we first prove the topological free entropy dimension of a MF-nuclear and inner QD algebra is irrelevant to its generating family. Then we give the relation between the topological orbit dimension K_2^{top} and the modified free orbit dimension K_2^2 by using MF-traces. We also introduce a new invariant K_3^{top} which is a modification of the topological orbit dimension K_2^{top} when K_2^{top} is defined. As applications, we prove that $K_3^{top}(A) = 0$ if A has property $C * -\Gamma$ and has no finite-dimensional representations. We also give the definition of property MF-$C^* - \Gamma$. We then conclude that, for the unital MF C*-algebra with no finite-dimensional representations, if A has property MF-$C * -\Gamma$, then $K_3^{top}(A) = 0$. (Received September 25, 2017)