1122-46-341 **Timothy Rainone** and **Christopher Schafhauser*** (cschafhauser@uwaterloo.ca).

*Approximations of crossed products and K-theoretic dynamics.*

A $C^*$-algebra is MF (matricial field) if it can be approximately embedded into matrix algebras. A question of Blackadar and Kirchberg asks if every $C^*$-algebra with a faithful trace is MF. In the case of crossed product $C^*$-algebras, it is also of interest to find dynamical characterizations of the MF property. I will survey some known results about this question and discuss some recent results on certain crossed products by free groups. In particular, for large classes of nuclear C*-algebras, the MF property of the crossed product can be detected through the K-theory. This is based on joint work with Tim Rainone. (Received August 16, 2016)