1074-47-47 **Catalin Georgescu** (Catalin.Georgescu@usd.edu) and **Gabriel Picioroaga*** (Gabriel.Picioroaga@usd.edu). *Fuglede-Kadison determinants for operators in the von Neumann algebra of an equivalence relation.*

We calculate the Fuglede-Kadison determinant for operators of the form $\sum_{i=1}^{n} M_{f_i} L_{g_i}$ where L_{g_i} are unitaries or partial isometries coming from Borel (partial) isomorphisms g_i on a probability space which generate an ergodic equivalence relation, and M_{f_i} are multiplication operators. We obtain formulas for the cases when the relation is treeable or the f_i's and g_i's satisfy some restrictions. (Received August 01, 2011)