1027-46-31 **Andrew S. Toms*** (atoms@mathstat.yorku.ca), Department of Mathematics and Statistics, York University, Toronto, Ontario M3J 1P3, Canada. *Recent progress on the Cuntz semigroup.*

In 1978 Cuntz introduced a generalised version of Murray-von Neumann comparison for positive elements in a C*-algebra. From this relation one may construct a positive partially ordered Abelian semigroup in much that same way that one constructs the semigroup of Murray-von Neumann equivalence classes of projections. This object is known simply as the Cuntz semigroup.

It has become apparent that the Cuntz semigroup will be a vital part of any complete invariant for separable amenable C*-algebras, and this has prompted an intensified study of the said object by Brown, Ciuperca, Coward, Elliott, Ivanescu, Perera, Rørdam, Winter, and me. I will give (at least) one definition of this semigroup, and tour the highlights of recent work in this area. (Received January 23, 2007)