Meeting: 999, Nashville, Tennessee, SS 13A, Special Session on Semigroup Theory

999-20-62   **Gracinda M .S. Gomes** (`ggomes@cii.fc.ul.pt`), Centro de Algebra da Universidade de Lisboa, Av. Prof. Gama Pinto, 2, 1649-003 Lisboa, Portugal, and **Donald B. McAlister*** (`don@math.niu.edu`), Department of Mathematical Sciences, Northern Illinois University, DeKalb, IL 60115. *Totally Ordered E-unitary Inverse Semigroups.* Preliminary report.

An inverse semigroup S is said to be E-unitary if it has the property that $ax = a$ implies $x^2 = x$ for any a, $x \in S$. These semigroups made their first formal appearance in a paper by T. Saitô [*Proper ordered inverse semigroups*, Pacific J. Math. **15** (1965), 649-666] which dealt with a class of totally ordered inverse semigroups. However they have since proved to play an interesting and important role in the theory of inverse semigroups in general. In this talk we shall give some preliminary results on questions which arise when totally ordered E-unitary inverse semigroups are looked at from the perspective of the theory of E-unitary semigroups in general which has developed since Saitô's original paper. In particular, it is known that every E-unitary inverse semigroup can be embedded in the semidirect product of a semilattice by a group. We shall ask if the analogous result is true for totally ordered E-unitary inverse semigroups. (Received August 09, 2004)

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