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

999-20-113 **M. E. Adams***, State University of New York, New Paltz, NY 12561, and **Jürg Schmid**, University of Bern, CH-3012 Bern, Switzerland. *Endomorphism monoids of pseudocomplemented semilattices.*

A *pseudocomplemented semilattice* $(S; \wedge, *, 0, 1)$ is an algebra where $(S; \wedge)$ is a semilattice with a least element 0, a greatest element 1, and a unary operation $*$ such that, for all s, $t \in S$, $s \wedge t = 0$ if and only if $t \leq s^*$.

For any pseudocomplemented semilattice S, the mapping $\gamma_S : S \longrightarrow S$ given by $\gamma_S(x) = x^{**}$ is an endomorphism of S (known as the *Glivenko endomorphism*) onto the *skeleton* S^* of S, where $S^* = \{x^* : \ x \in S\}$ is a Boolean algebra (setting $x \vee y = (x^* \wedge y^*)^*$). In particular, if S is not Boolean, then it has a non-trivial endomorphism onto its skeleton S^*.

It is shown that, for any monoid M, there exists a proper class of non-isomorphic pseudocomplemented semilattices such that, for each member S, the endomorphisms of S which do not have an image contained in S^* form a submonoid of the endomorphism monoid of S which is isomorphic to M. This result is a consequence of the following:

Theorem: The variety **S** of all pseudocomplemented semilattices is finite-to-finite relatively universal with respect to the subvariety of all Boolean algebras. (Received August 17, 2004)