## 962-20-149 James A. Anderson\* (janderson@gw.uscs.edu), Department of Mathematics, University of South Carolina–Spartanburg, Spartanburg, SC 29303, and Wit Forys, Jagiellonian University, Institue of Computer Science, Krakow, Poland. *Regular Languages and Semiretracts*.

Let A be a finite set and  $A^*$  be the free monoid generated by A. A retraction  $r: A^* \to A^*$  is a homomorphism such that  $r^2 = r$ . A retract of  $A^*$  is a submonoid of  $A^*$  that is the image of a retraction. A semiretract is the intersection of a nonempty family of retracts. It has been shown that any semiretract expressed as a family of retracts is the intersection of a finite subfamily of this family of retracts. Further, it has been shown that it is possible, given a given semiretract, to construct two retracts so that the given semiretract is the intersection of these retracts. A regular language is a retract if and only if it is generated by a key code. In this paper, necessary and sufficient conditions are given so that a regular language is a semiretract. (Received August 11, 2000)