

**Meeting:** 1003, Atlanta, Georgia, MAA CP X1, MAA General Contributed Paper Session, I

1003-X1-430      **G. Alan Cannon\*** (acannon@selu.edu), Department of Mathematics, Southeastern Louisiana University, Hammond, LA 70402, **Mark Farag** (mfarag@wagner.edu), Department of Mathematics & Computer Science, Wagner College, 1 Campus Road, Staten Island, NY, and **Lucyna Kabza** (lkabza@selu.edu), Department of Mathematics, Southeastern Louisiana University, Hammond, LA 70402. *Centers and Generalized Centers of Nearrings.*

Let  $N$  be a right nearring. Denote by  $C(N)$  the multiplicative center of  $N$  and by  $N_d$  the set of left-distributive elements of  $N$ . In general,  $C(N)$  need not be closed under the addition of  $N$ . However, the generalized center of  $N$ ,  $GC(N) = \{a \in N \mid an_d = n_da \text{ for all } n_d \in N_d\}$ , is always a subnearring of  $N$  containing  $C(N)$ . We study the problem of determining when  $C(N)$  is a subnearring of  $N$ . We show that, for certain classes of nearrings,  $C(N)$  is a subnearring of  $N$  if and only if  $C(N) = GC(N)$ . Nearrings studied include distributively generated nearrings, nearrings of functions, and nearrings of polynomials. (Received September 14, 2004)