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**DAVID SALTMAN**, CCR-Princeton

*Persistent Fields*

In 1976 Murray Schacher and Burt Fein showed the following. Suppose  $D/F$  is a division algebra,  $L/F$  a Galois extension of fields, and every maximal subfield of  $D$  contains an isomorphic copy of  $L/F$ . Then  $L = F(\sqrt{-1})$  and  $D$  contains  $(-1, -1)_F$  the Hamilton quaternions. Louis Rowen and I revisited this sort of question responding to some questions of Andrei Rapinchuk concerning linear algebraic groups. I will explain this connection and give our strengthening of the Fein Schacher result. Because of symplectic and orthogonal groups, we also prove parallel results for division algebras with involution.