Andy R. Magid* (amagid@ou.edu), Department of Mathematics, University of Oklahoma, 601 Elm Room 423, Norman, OK 73072. Some Problems in Galois Theory and Representation Theory. Preliminary report.

We present some problems in a number of areas along with some partially successful and partially unsuccessful solution strategies. The problems are from Galois theory of commutative rings, algebraic group actions on commutative rings, representation varieties of groups, and differential Galois theory. (Received September 21, 2009)