1145-65-505 Xiu Ye* (xxye@ualr.edu), 2801 S. University, Little Rock, AR 72204. Discontinuous Galerkin method and Weak Galerkin Method.

Interior penalty discontinuous Galerkin (IPDG) methods and weak Galerkin (WG) methods are studied to solve the problems such as Div-Curl problems and second order elliptic problems in non-divergence form. The numerical results of the both IPDG methods and WG methods are presented. Some new developments of the WG methods also are discussed. (Received September 07, 2018)