Polynomial preconditioned GMRES-DR\textsuperscript{1} QUAN LIU, Baylor University — GMRES-DR (Generalized Minimal Residual algorithm with Deflated Restarting), developed by Dr. Ronald Morgan in 2002, is a well known algorithm in QCD matrix calculation. We did a modified version of regular GMRES-DR by combining it with the polynomial conditioning method, which can help improve the eigenvalue spectrum of the lattice QCD matrix, especially for ill-conditioned matrix with small eigenvalues.

\textsuperscript{1}Walter Wilcox, Baylor University