

1138-47-358

Greg Knese* (geknese@wustl.edu), Washington University in St. Louis, One Brookings Drive, Dept of Math, CB 1146, Saint Louis, MO 63130. *Global bounds on stable polynomials.*

A classical inequality of Szász bounds polynomials with no zeros in the upper half plane entirely in terms of their first few coefficients. Borcea-Brändén generalized this result to several variables as a piece of their characterization of linear maps on polynomials preserving stability. In this talk, we discuss improvements to Szász's original inequality, use determinantal representations to prove Szász type inequalities in two variables, and then prove that one can use the two variable inequality to prove an inequality for several variables. (Received February 13, 2018)