ROSTAM SABETI, Olivet College

1-variable Descartes' Rule of signs and ideal of symmetric polynomials

Given a sign pattern for the coefficients of an unknown polynomial $p(x)$ in $\mathbb{C}[x]$ of degree n and consider the coefficients as symmetric polynomials in $\mathbb{C}[s_1, \cdots, s_n]$, we prove that at the rational roots of $p(x)$ proposed by Anderson, Jackson and Sitharam the rank of the associated symmetric system is either one or two.