Bilkent University
Department of Mathematics

Problem Of The Month

Term: November 2014

Let $P_i(x) = x^2 + b_i x + c_i; i = 1, 2, \ldots, n$ be pairwise distinct polynomials of second degree so that for any $1 \leq i < j \leq n$ the polynomial $P_{i,j}(x) = P_i(x) + P_j(x)$ has only one real root. Find the maximal possible value of n.