PIMS / AMI Seminar

Friday, February 15, 2013
3:00 p.m.
CAB 357

“Hausdorff Geometry of Polynomials”

Blagovest Sendov
Institute of Information and Communication Technologies Section on Parallel Algorithms
Bulgaria Academy of Sciences

Abstract

Let $D(c; r)$ be the smallest disk, with center $c$ and radius $r$, containing all zeros of the polynomial $p(z) = (z-z_1)(z-z_2) \cdots (z-z_n)$. In 1958, we conjectured that for every zero $z_k$ of $p(z)$, the disk $D(z_k; r)$ contains at least one zero of the derivative $p'(z)$. More than 100 papers are devoted to this conjecture, proving it for different special cases. But in general, the conjecture is proved only for the polynomials of degree $n \leq 8$. In this lecture we review the latest developments and generalizations of the conjecture.

References


Refreshments will be served in CAB 649 at 2:30 p.m.