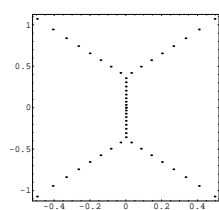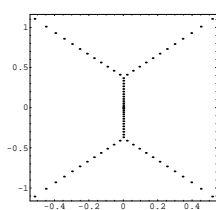## On Roots of Eigenpolynomials for Exactly-Solvable Operators
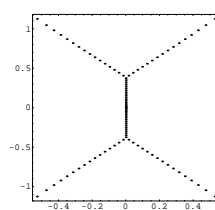
We will discuss asymptotic properties of zeros in families of polynomials appearing as eigenfunctions for degenerate exactly-solvable operators. We present an explicit conjecture and partial results on the growth of the largest root. After an appropriate scaling our polynomials will have compactly supported zero distribution when the degree tends to infinity. Computer experiments indicate the existence of a limiting measure for the asymptotic zero distribution. Conjecturally its support is a tree. Below we present a typical picture. Here the operator is $T = z^3D^3 + z^2D^4 + zD^5$, and n denotes the degree of its scaled eigenpolynomial.

$n = 50$ $n = 75$ $n = 100$