

## ZEROS OF SECTIONS OF THE BINOMIAL EXPANSION\*

SVANTE JANSON<sup>†</sup> AND TIMOTHY S. NORFOLK<sup>‡</sup>

*Dedicated to Richard S. Varga, on the occasion of his 80th birthday.*

**Abstract.** We examine the asymptotic behavior of the zeros of sections of the binomial expansion, that is, we consider the distribution of zeros of  $B_{r,n}(z) = \sum_{k=0}^r \binom{n}{k} z^k$ , where  $1 \leq r \leq n$ .

**Key words.** Binomial expansion, partial sums, zeros.

**AMS subject classifications.** 30C15.

---

\*Received March 12, 2009. Accepted August 8, 2009. Published online December 16, 2009. Recommended by Volodymyr Andriyevskyy.

<sup>†</sup>Department of Mathematics, Uppsala University, Sweden ([svante@math.uu.se](mailto:svante@math.uu.se)).

<sup>‡</sup>Department of Theoretical and Applied Mathematics, The University of Akron, U.S.A., ([norfolk@uakron.edu](mailto:norfolk@uakron.edu)).