J. Mashreghi and T. J. Ransford, **Binomial sums and functions of exponential type**, *Bull. London Math. Soc* 37 (2005), 15–24.

Abstract
Let $(a_n)_{n\geq 0}$ be a sequence of complex numbers, and, for $n \geq 0$, let

$$b_n = \sum_{k=0}^{n} \binom{n}{k} a_k \qquad \text{and} \qquad c_n = \sum_{k=0}^{n} \binom{n}{k} (-1)^{n-k} a_k.$$

We prove a number of results relating the growth of the sequences (b_n) and (c_n) to that of (a_n). For example, given $p \geq 0$, if $b_n = O(n^p)$ and $c_n = O(e^{\epsilon\sqrt{n}})$ for all $\epsilon > 0$, then $a_n = 0$ for all $n > p$. Also, given $0 < \rho < 1$, we have $b_n, c_n = O(e^{\epsilon n^\rho})$ for all $\epsilon > 0$ iff $n^{1/\rho-1}|a_n|^{1/n} \to 0$. We further show that, given $\beta > 1$, if $b_n, c_n = O(\beta^n)$, then $a_n = O(\alpha^n)$, where $\alpha = \sqrt{\beta^2 - 1}$, thereby proving a conjecture of Chalendar, Kellay and Ransford.
The principal ingredients of the proofs are a Phragmén–Lindelöf theorem for entire functions of zero exponential type, and an estimate for the expected value of $e^{\phi(X)}$, where X is a Poisson random variable.