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*Sign changes of the error term in the Piltz divisor problem*

For an integer  $k \geq 3$ , let  $\Delta_k(x) := \sum_{n \leq x} d_k(n) - \text{Res}_{s=1}(\zeta^k(s)x^s/s)$ , where  $d_k(n)$  is the  $k$ -fold divisor function and  $\zeta(s)$  is the Riemann zeta-function. In the 1950's, Tong showed for all large enough  $X$  that  $\Delta_k(x)$  changes sign at least once in the interval  $[X, X + C_k X^{1-1/k}]$ , where  $C_k$  is some constant. Assuming the Lindelof Hypothesis, we show the existence of many subintervals of  $[X, 2X]$  of length  $X^{1-1/k-\varepsilon}$  such that  $\Delta_k(x)$  does not change sign in any of these subintervals. This is joint work with Cruz Castillo.