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Monotonic sequences related to zeros of Bessel functions

In the course of their work on Salem numbers and uniform distribution modulo 1 (see Publ. Math. Debrecen **64**(2004), 329–341), A. Akiyama and Y. Tanigawa proved some inequalities concerning the values of the Bessel function J_0 at multiples of π , i.e., at the zeros of $J_{1/2}$. This raises the question of inequalities and monotonicity properties for the sequences of values of one cylinder function at the zeros of another such function. Here we derive such results by differential equations methods. Some related results are considered.

This is joint work with Lee Lorch.