ICM-9205-31 A Lower Bound for the de Bruijn-Newman Constant Λ. II, R.S. Varga, T.S. Norfolk and A. Ruttan, Conference Proceedings of the US-USSR 1990 Conference on Approximation Theory, (to appear).

ABSTRACT: A new constructive method is given here for determining lower bounds for the de Bruijn-Newman constant Λ, which is related to the Riemann Hypothesis. This method depends on directly tracking real and nonreal zeros of an entire function $F_\lambda(z)$, where $\lambda < 0$, instead of finding, as was previously done, nonreal zeros of associated Jensen polynomials. We apply this new method to obtain the new lower bound for Λ,

$$-0.385 < \Lambda,$$

which improves previous published lower bounds of -50 and -5.