Zeilberger, Doron; **Zudilin, Wadim**

The irrationality measure of π is at most 7.103205334137.... (English) Zbl 1456.11129

Mosc. J. Comb. Number Theory 9, No. 4, 407-419 (2020).

The main result of this paper is that the irrationality measure exponent of the number π is less than 7.103205334138. The proof uses complex analysis, is based on clever calculating of special integral and is in the spirit of Salikov.

Reviewer: Jaroslav Hančl (Ostrava)

MSC:

11J82 Measures of irrationality and of transcendence
11Y60 Evaluation of number-theoretic constants
33F10 Symbolic computation of special functions (Gosper and Zeilberger algorithms, etc.)
33C60 Hypergeometric integrals and functions defined by them (E, G, H and I functions)

Keywords:

π; irrationality measure exponent; experimental mathematics; Almkvist-Zeilberger algorithm

Full Text: DOI arXiv