

Machin's type formulas for π

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In 1706, John Machin used a formula expressing π as a combination of two arctangents and, with it, calculated 100 decimal places of π . Quite a few similar formulas are known today, which are called Machin-type formulas.

In the talk we will discuss some issues related to these formulas, and we will see a procedure for finding infinitely many such formulas, with any number of summands. In particular, this allows us to show that there are Machin-type formulas with Lehmer measure as small as one wishes.

The content of the talk comes from this article: A. Gasull, F. Luca and J. L. Varona, *Three essays on Machin's type formulas*, Indag. Math. (N.S.) 34 (2023), 1373-1396.