

Diophantine Approximation, Fractal Geometry and Related topics /  
Approximation diophantienne, géométrie fractale et sujets connexes

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## Stéphane Fischler

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Irrationality measures of values of E-functions

E-functions are a class of special functions introduced by Siegel in 1929; they include the exponential and Bessel functions. Values of E-functions at algebraic numbers are never Liouville : they are never extremely well approximated by rationals. If an E-function with rational coefficients is evaluated at a rational number, a more precise result holds : if irrational, the value has exponent of irrationality 2, like a randomly chosen number. This is a joint work with Tanguy Rivoal, based mostly on results of Shidlovsky, Chudnovsky, André and Beukers.