

# Analytic and combinatorial properties of $4^n$ Cantor squares

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## **Abstract**

Based on a joint work with F. Nazarov and Y. Peres a new estimate of the Buffon needle probability of a neighborhood of  $1/4$  corner Cantor set will be given. We also discuss extremal properties of  $4^n$  corner Cantor squares, extremality being considered with respect to two intimately related (but nobody knows how) functionals: analytic capacity and Buffon needle probability.