E_2 NUMBERS IN ALMOST ALL SHORT INTERVALS

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Abstract: In the talk I will discuss my joint work with Joni Teräväinen, where we show that, for almost all $x \in [X, 2X]$, the interval $(x, x + (\log x)^{2.1}]$ contains products of exactly two primes. This improves on Teräväinen's earlier work that had 3.51 in place of 2.1. In the first part of the talk I will discuss what is known about primes and almost primes in short intervals and in the second part I will discuss how to prove the mentioned theorem concerning E_2 numbers in almost all short intervals.

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