Bounding the partial sums of the Möbius function

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Abstract

One of my favorite quotations in Mathematics is from Titchmarsh, who remarked: "The finer theory of the partial sums of the Möbius function is extremely obscure, and the results are not nearly so precise as the corresponding ones in the prime number problem." In this talk, we will show how certain extremal functions in Fourier analysis can be employed to obtain good bounds for the partial sums of the Möbius function. This is a joint work with Harald A. Helfgott.

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