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*The asymptotic merit factor of binary sequences*

The merit factor of a binary sequence measures the collective smallness of its aperiodic autocorrelation coefficients. Long binary sequences with large merit factor are attractive in digital communications applications, and correspond to high-degree polynomials with  $\{+1, -1\}$  coefficients having small  $L_4$  norm on the unit circle. We analyse the behaviour of the merit factor of several classes of binary sequences, as the sequence length increases without bound.

This is joint work with Kai-Uwe Schmidt.