

**Title:** Sequences with bounded auto-correlations

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**Abstract:** For a sequence of complex numbers  $a_0, a_1, \dots, a_{N-1}$ , its aperiodic auto-correlation sequence  $\{c_k\}$  is defined by

$$c_k := \sum_{j=0}^{N-1-k} \overline{a_j} a_{j+k}$$

for  $0 \leq k < N$  and,  $c_{-k} := \overline{c_k}$ . We are interested in several special (real) sequences  $\{a_j\}$  with almost all auto-correlations explicitly bounded. In particular, Barker sequences and generalized Sidon sets will be discussed.