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Andrzej K Brodzik* (andrzej.k.brodzik@gmail.com). *Design of Golay sequences in Zak space*. Preliminary report.

Zak space provides a convenient framework for design of sets of polyphase sequences with good periodic correlation properties, which have many applications in radar, sonar and communications. One of such sets is the set of periodic Golay sequences. In this work a special case of periodic Golay sequence set is considered, where each of the sequences in the set has compact support in Zak space, an optimal zero auto correlation zone, and any two sequences in the set have an all-zero crosscorrelation. Sequences with compact support in Zak space are, in general, more difficult to compute and identify, which can be advantageous when used in covert applications. (Received September 24, 2018)