Abstract

In this note, we present a connection between designing low correlation zone (LCZ) sequences and the results of correlation of sequences with subfield decompositions presented in a recent book by the first two authors [2]. This results in low correlation zone signal sets with huge sizes over three different alphabetic sets: finite field of size q, integer residue ring modulo q, and the subset in the complex field which consists of powers of a primitive q-th root of unity. We also provide two open problems along this direction.