

Review of: "Bent Functions and Strongly Regular Graphs"

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Potential competing interests: No potential competing interests to declare.

Review Report:

Bent functions represent a well-established class of Boolean functions, known for their significant role in cryptography. The Cayley graph constructed over \mathbb{Z}_2^n

based on the support of a bent function forms a strongly regular graph denoted as $\text{srg}(v, k, \lambda, \mu)$, where $\lambda = \mu$. This note provides a comprehensive listing of the parameters characterizing such Cayley graphs. Additionally, we establish a condition applicable to (n, m) -bent functions $F = (f_1, \dots, f_m)$, which involves the support of their individual components f_i and their n -ary symmetric differences.

I have checked all solutions and all results. The following recommendations must be given:

1. Review the document carefully; there are punctuation errors. For example, before Corollary 4.3, you must add a point.

2. Please add demonstrations of your propositions.

3. I recommend the following works:

(a) Cesarano, C., Ramírez, W., Díaz, S.: New results for degenerated generalized Apostol–Bernoulli, Apostol–Euler and Apostol–Genocchi polynomials. *WSEAS Transactions on Mathematics*. 2022, 21, 604-608.

(b) Díaz, S., Clemente, C., and Ramírez, W., Shamaon, A. Khan, W.A. On Apostol-Type Hermite Degenerated Polynomials. *Mathematics*, 2023, 11(8), 1914.

(c) Cesarano, C., and Ramírez, W.: Some new classes of degenerated generalized Apostol–Bernoulli, Apostol–Euler and Apostol–Genocchi polynomials. *Carpathian Math. Publ*, 4, no. 2, 2022.

I recommend their publication after major adjustments are made.