Review of: "Bent Functions and Strongly Regular Graphs"

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Potential competing interests: No potential competing interests to declare.

The paper addresses the connection between bent functions, a specialized class of Boolean functions essential in cryptography, and strongly regular graphs (SRGs). By examining Cayley graphs defined by the support of bent functions, the study lists parameters for these graphs and provides conditions for (n,m)(n,m)(n,m)-bent functions. This involves their components' support and nnn-ary symmetric differences. The paper contributes to both the theory of cryptography and graph theory, with implications for designing secure cryptographic systems.

Strengths:

1. The call for further exploration of APN functions and odd-nnn cases sets the stage for subsequent research.
2. The conclusion succinctly encapsulates the study's contributions.

Weaknesses: The paper could have provided preliminary insights into the challenges and potential methods for extending the work to odd-nnn cases or APN functions.

Overall Rating: **4/5** The paper makes a strong theoretical contribution to the study of bent functions and SRGs, but it could benefit from more practical examples, visual aids, and detailed future directions.