On the construction of extremal Type II codes over $\mathbb{Z}_{2^k}$

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(Joint work with S. Ban Martinović)

Extremal Type II $\mathbb{Z}_{2^k}$-codes are a class of self-dual $\mathbb{Z}_{2^k}$-codes with Euclidean weights divisible by $2^{(k+1)}$ and the largest possible minimum Euclidean weight for a given length.

The topic of this talk is the construction of extremal Type II $\mathbb{Z}_{2^k}$-codes using the doubling method. With this method we have constructed new extremal $\mathbb{Z}_{2^k}$-codes for $k \in \{2, 3, 4\}$.

References

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