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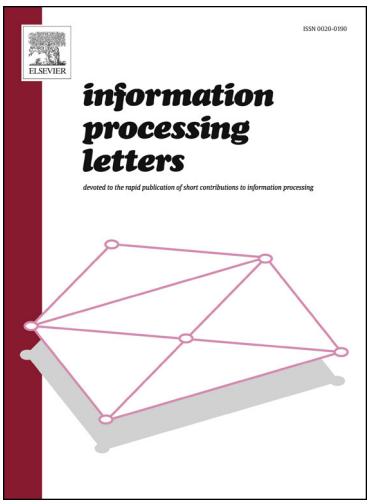

New quantum codes constructed from some self-dual additive $\mathbb{F}_4$-codes

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Highlights

- For $(n, d) = (66, 17), (78, 19)$ and $(94, 21)$, we construct quantum $[[n, 0, d]]$ codes which improve the previously known lower bounds on the largest minimum weights among quantum codes with these parameters. These codes are constructed from self-dual additive $\mathbb{F}_4$-codes based on pairs of circulant matrices.