**Fon-Der-Flaass, D. G.**

**Perfect colorings of the 12-cube that attain the bound on correlation immunity.** (Russian. English summary) Zbl 1132.05314

Sib. Èlektron. Mat. Izv. 4, 292-295 (2007).

Summary: We construct perfect 2-colorings of the 12-hypercube that attain our recent bound on the dimension of arbitrary correlation immune functions. We prove that such colorings with parameters $(x, 12-x, 4+x, 8-x)$ exist if $x = 0, 2, 3$ and do not exist if $x = 1$.

**MSC:**

05C15 Coloring of graphs and hypergraphs



**Keywords:**

Boolean function; maximal nonlinearity