Koung, C. C.; **Opatrny, J.**
d-dimensional linear congruential graphs. (English) Zbl 0804.05048
Congr. Numerantium 95, 163-172 (1993).

The d-dimensional linear congruential graph is defined as follows: The vertex set is a finite d-dimensional linear space $Z_{s_1} \times \cdots \times Z_{s_d}$ where Z_{s_i} is the residue group modulo s_i. The edge set is defined by d linear functions. This is a generalization of de Bruijn digraphs, Kautz digraphs, generalized de Bruijn digraphs, and Imase-Itoh digraphs. In this paper, the authors show that for properly selected functions, 2-dimensional linear congruential graphs generate regular, highly connected graphs.

Reviewer: Du Ding-Zhu (Minneapolis)

MSC:

05C50 Graphs and linear algebra (matrices, eigenvalues, etc.)
05C20 Directed graphs (digraphs), tournaments

Keywords:

linear congruential graph; digraphs