Designs of Variations of Conflict-Free-Colorings of Rectangular Lattices

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A conflict-free-coloring of a graph G is a vertex-coloring of G such that for every vertex v, there is a color assigned to exactly one vertex among v and its neighbors. This idea has received much attention recently with much work done in the planar setting, along with studying the idea from a complexity standpoint. In this talk, we view the idea from a design standpoint and provide explicit constructions for some variations of conflict-free-colorings of rectangular lattice graphs.

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