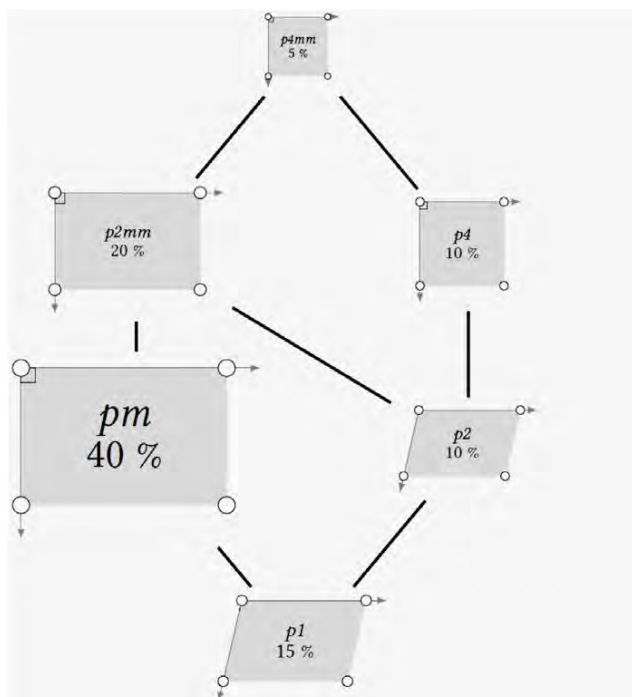


the inherent subjectivity of the currently practiced approach where pure distance measures are utilized. When generalized to 3D, the above mentioned G-AIC approach [2] combined with Akaike weights will lead to superior noise-level dependent crystallographic symmetry classifications and subsequent re-assignments of mis-classified 3D structures to a range of symmetry types, classes, and groups where the probabilities of belonging to certain classifications is in each case quantified in an objective way.



References:

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Multidimensional crossed cube tilings

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The two-dimensional squiral (square spiral) tiling is an example of a non-pisot substitution tiling with singular continuous Fourier spectrum. Baake and Grimm invented the crossed square lattice substitution tiling as a simple equivalent to the squiral tiling [1]. I generalize this tiling to arbitrary dimension and call it “crossed cube tiling”. I explicitly show its three- and four-dimensional instances. The method is valid in any dimension from zero to countable infinity but the size of the tiling grows exponentially and becomes quite impracticable in dimensions five and more.

References:

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