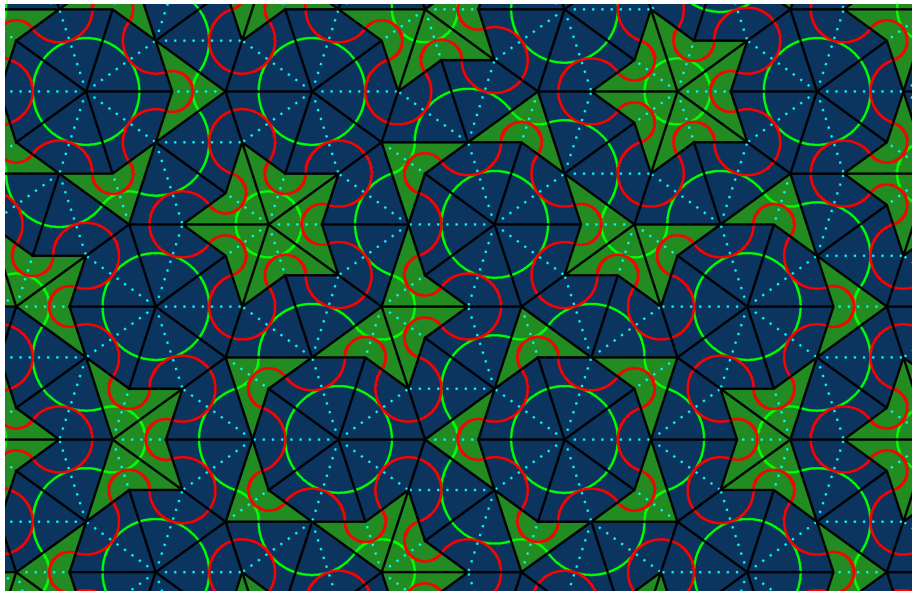


Tiling Aperiodically with the Hat

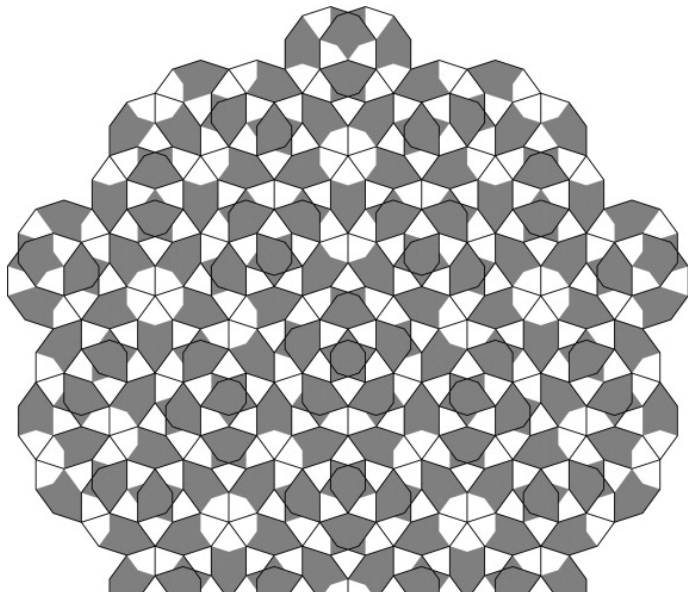
Ariana Chin

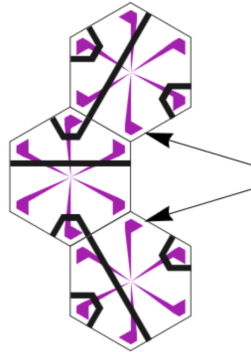
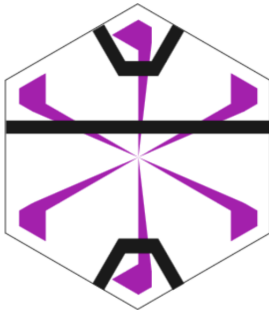
June 9, 2023

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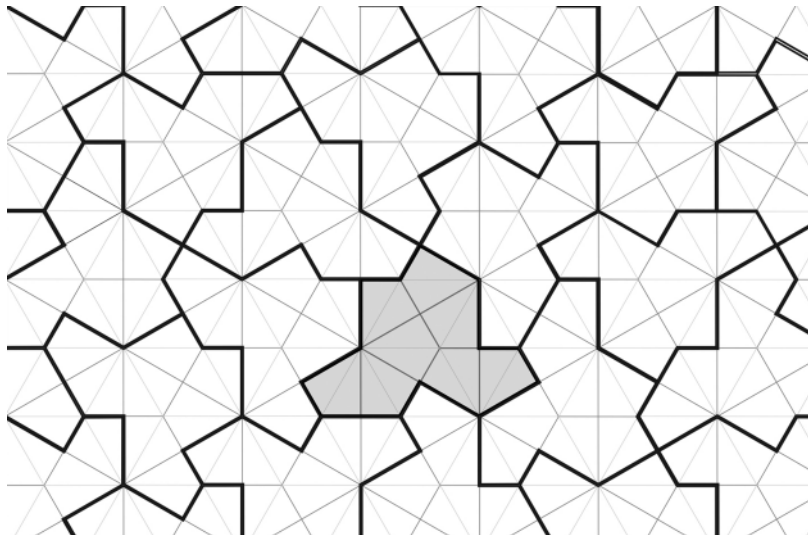


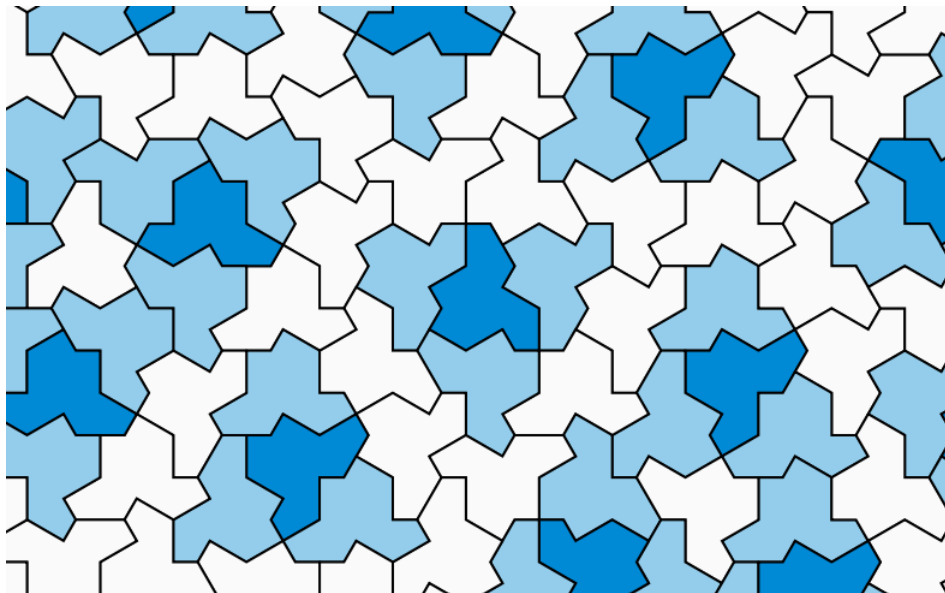
Gummelt (Penrose) Tiling (1996)

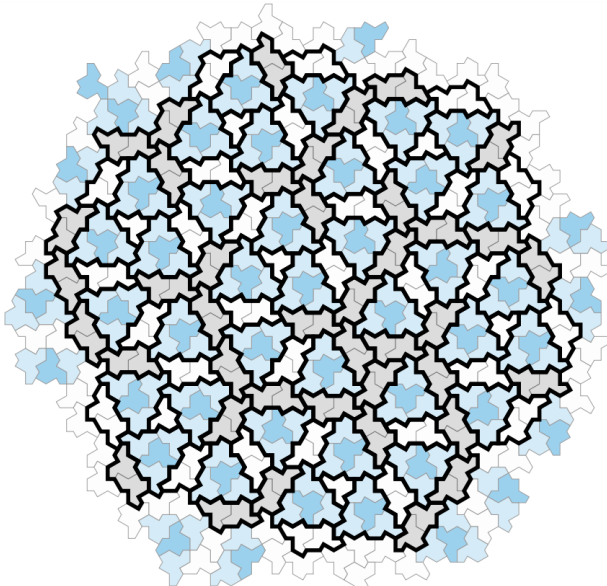


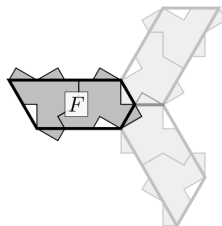
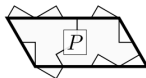
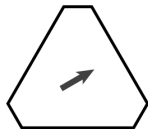


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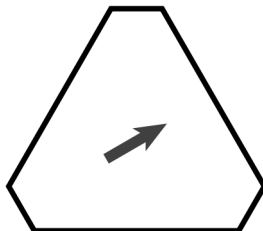
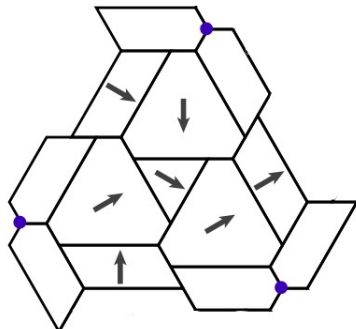




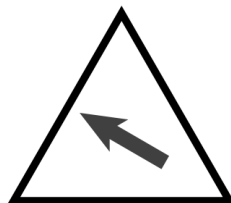
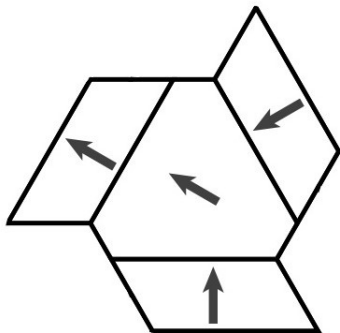


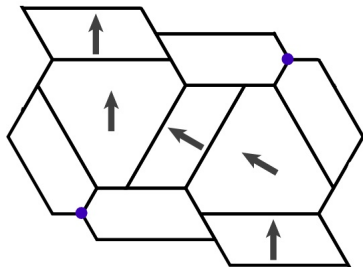


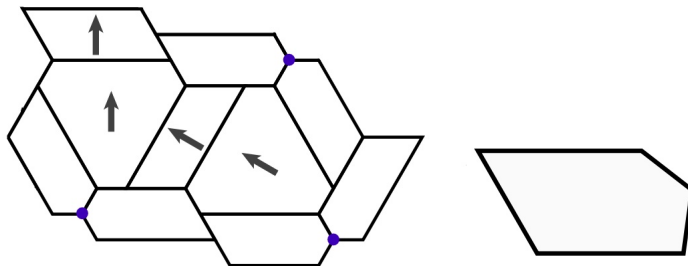
Building Supertiles: H

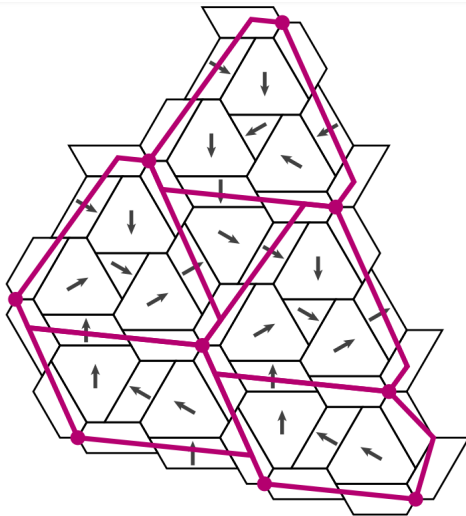


Building Supertiles: T





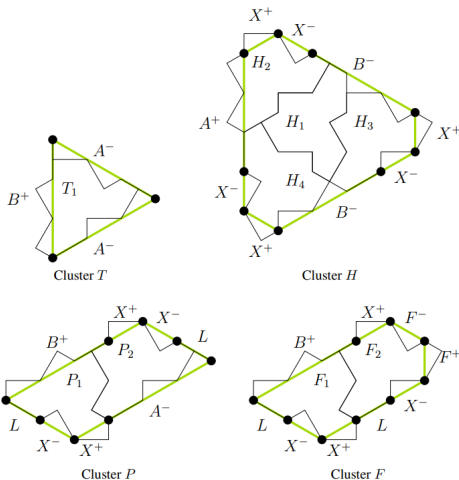




Build Supertiles!

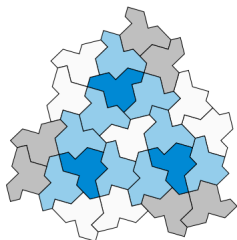
<https://cs.uwaterloo.ca/~csk/hat/>

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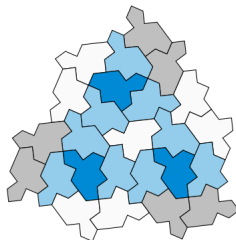


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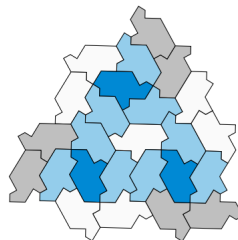
Another Tile?



$\text{Tile}(1, \sqrt{3})$



$\text{Tile}(1, 1)$



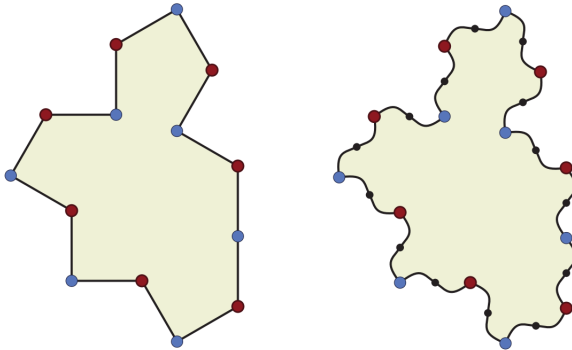
$\text{Tile}(\sqrt{3}, 1)$

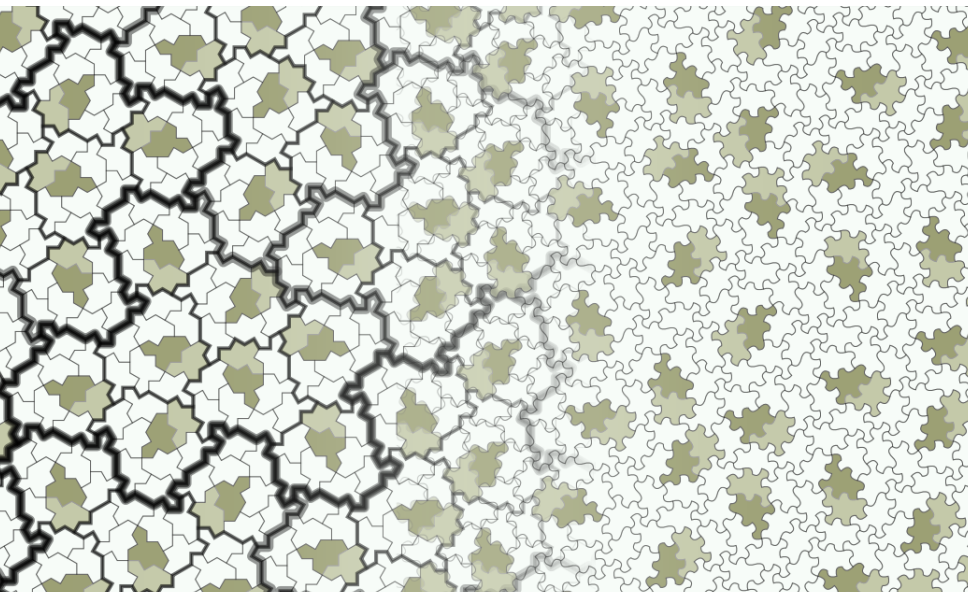
A Family of Tiles

Another Tile

University of California, LA

Construction of a Spectre





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Gummelt, Petra (1996). “Penrose tilings as coverings of congruent decagons”. In: *Geometriae Dedicata* 62, pp. 1–17.



Socolar, Joshua E. S. and Joan M. Taylor (2010). “An aperiodic hexagonal tile”. In: *Arxiv*.