Some recent developments in tiling with polyominoes

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In 1966, S.W. Golomb published a tiling hierarchy for tiling with multiple copies of a single polyomino, and classified, with one exception, the tiling capabilities of each polyomino up to size six. For the exceptional shape, the Y hexomino, he illustrated that it tiles a half strip of width 16, but was unable to determine if it tiles a rectangle.
About twenty years later, two mathematicians independently showed that the Y hexomino tiles a rectangle, and the smallest such tiling requires 92 tiles. Since then, others have looked for other tilings of rectangles by the Y hexomino.
Ultimately, we would like to know *every* rectangle that can be tiled by the Y hexomino. In this talk, we give some of the history, and some recent progress that has been made on this problem, as well as on some related problems.

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