

1077-51-15

Erik Demaine*, MIT, Cambridge, MA 02139. *Geometric puzzles: Algorithms and complexity.*

I love geometry because the problems and solutions are fun and often tangible. Puzzles are one way to express these two features, and are also a great source of their own computational geometry problems: which puzzles can be solved and/or designed efficiently using computer algorithms?

Proving puzzles to be computationally difficult leads to a mathematical sort of puzzle, designing gadgets to build computers out of puzzles. I will describe a variety of algorithmic and computational complexity results on geometric puzzles, focusing on more playful and recent results. (Received April 13, 2011)