

Efficient Experimental Mathematics for Lattice Path Combinatorics

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Classifying lattice walks in restricted lattices is an important problem in enumerative combinatorics. Recently, experimental mathematics has been used to explore and solve a number of difficult questions related to lattice walks. In this talk, we will give an overview of recent results on structural properties and explicit formulas for generating functions of walks in the quarter plane, with an emphasis on the algorithmic methodology.