

Laurent Vuillon, *Université de Savoie*

Tomographic Reconstruction of 2-convex Polyominoes using Dual Horn Clauses

Abstract

In this talk, we consider a recently defined hierarchy by G. Castiglione, and A. Restivo on k -convex polyominoes and we focus on a longstanding research on the reconstruction of its first levels by specializing the algorithm of E. Barcucci, A. Del Lungo, M. Nivat, R. Pinzani for the reconstruction of hv -convex polyominoes by orthogonal projections in polynomial time. We show how to express the notion of 2-convexity that characterizes the elements of the second level of the hierarchy, by logic formula belonging to Dual-Horn Clauses and so polynomially solvable.

This is a joint work with Andrea Frosini and it will be published in the TCS Special Issue for the memory of Maurice Nivat.