

Programme partiel.

Seminar on the interactions between discrete geometry and combinatorics on words

This seminar does not require any specific knowledge or background. It will be rather informal, and will proceed on a slow pace. There will be room to add other talks, according to the audience will.

Monday, May 17th

9:30 - 10:30 Srečko Brlek : Introduction

Basic properties on words; Lyndon factorizations; Fine and Wilf theorem; equations on words; Christoffel words.
Coding of discrete figures in the square lattice;

11:00 - 12:00 Srečko Brlek : Discrete convexity.

Detection algorithms. Lyndon + Christoffel = Digitally convex.

14:00 - 15:00 Xavier Provençal : Path intersections.

Encoding by quadtrees. Detection of intersections without sorting.

15:30 - 16h30 Annemiek Cornelissen

Blood vessel branching morphogenesis, growing a tree on a square grid.

Tuesday, May 18th

9:30 - 10:30 Srečko Brlek : Words and tilings of the plane

11:00 - 12:00 Xavier Provençal : Algorithmes linéaires pour le problème du pavage par translation.

14:00 - 15:00 Damien Jamet : Sur la topologie des hyperplans arithmétiques

15:30 - 16h30 To be announced: Smooth tilings.

Wednesday, May 19th : open problems and free discussion.