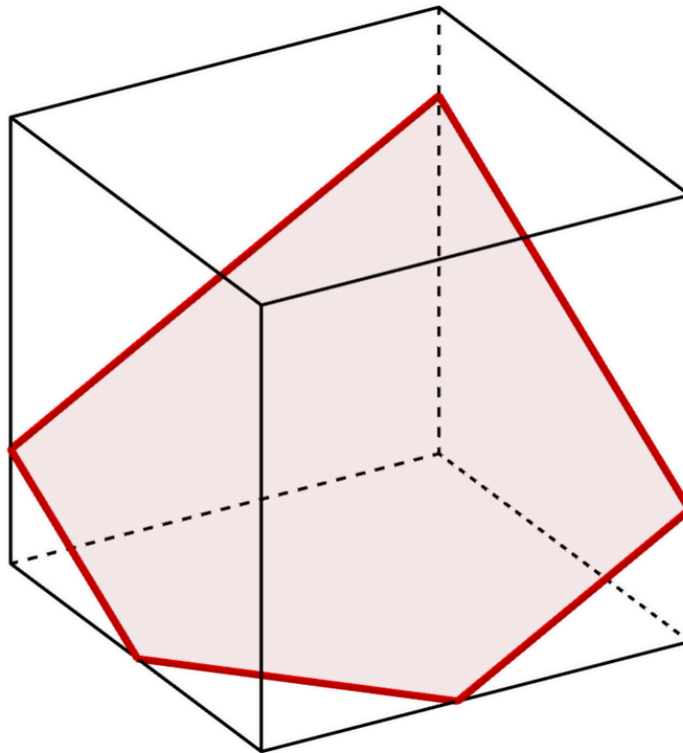# SECTIONS OF THE CUBE
Supervisors: Wai Lam, Antonella Perucca
Project level: students of any semester

If you cut a cube with a plane, you obtain a convex shape that is either a point, a segment, or a polygon. Triangular shapes are completely understood (see https://math.uni.lu/cube). The aim of this project is classifying the possible quadrilaterals, pentagons and hexagons. For example, the pentagon will have 2 pairs of parallel sides and we may first look, forgetting the cube, at classifying/parametrising the pentagons of this form. Thus the aim is expanding on the above website and going towards a full classification of the sections of the cube that is both mathematically complete and accessible to high-school pupils. According to our progress during the semester, we will see whether we only handle quadrilaterals or also approach pentagons and hexagons.