

COP 4930/5930 – Computational Geometry¹

Homework 2

Full grade: 20 points

☞ *You are **not** allowed to collaborate.*

1 Problem description

In this assignment, you need to 3-color the vertices of a simple polygon so that the coloring can be used for placing cameras to guard the polygon. For triangulation, use the $O(n^2)$ -time ear-clipping algorithm. Use the code supplied to you. Your main task is to complete the **triangulatePolygon** function. Use the **isCorrectColoring** function to check if your coloring is correct.

2 What to deliver?

Just upload the completed header file **PolygonTriangulation.h** to Canvas.

Commenting is highly encouraged. Please test thoroughly before submission. You will be given zero if your program does not compile or gives unnecessary warnings. You are allowed to submit your solutions multiple times. We will grade your latest submission only. Your code will be graded using the CLion IDE on macOS/Linux.

¹ \LaTeX compiled on February 17, 2022 at 9:28pm