

All students (even auditors) must participate in a final project. You may work in groups with one to four members. Larger groups are allowed with permission. There are two tracks, you must pick one (see below). I am happy to participate in group discussion (even if it is outside of office hours). We will still have homework assignments, however, the assignments will be substantially easier to provide you with adequate time to work on the final project.

On April 6th, in class, each team will have a few minutes to describe what they are working on. Teams can morph and change until the end of the day April 8th.

**Goal for paper track** Explore an open research problem and write a short paper. The paper should include a problem definition and partial results. Expected length is about 6 pages.

There are a lot of open problem lists in Computational Geometry around the internet. For example The Open Problems Project (<https://cs.smith.edu/~jorourke/TOPP/>). Also feel free to come and speak with me to get additional ideas.

**Goal for implementation track** Do an implementation project and a brief report. You have a lot of freedom. The project can be from class or your own research interest (but still related to Computational Geometry). You can animate and algorithm or prototype and implementation idea. Again, feel free to come speak with me to get additional ideas.

### Deliverables

- now-Fri April 2: Send a direct message on slack or speak with me about a problem that you are interested in so that I can point out resources and make sure you are not working on something that is too hard or already solved.
- April 6: In class, present problem description (at most 5 min).
- April 8: On slack, direct message me a one page outline and plan of attack.
- April 15: On the course's slack channel post a progress report.
- April 22: First draft (for paper track) / progress report (implementation track)
- April 27: Final version
- April 27+29: 10-15 min presentations
- May 7 (optional): Canadian Conference in Computational Geometry (CCCG) takes short papers. This summer, CCCG is in Halifax Conference site: <https://projects.cs.dal.ca/cccg2021/>.

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