Be a part of a master project –and improve your spatial skills and programming skills

We are studying the correlation between spatial skills and computer science (CS), and would like you to take part – indeed, your participation could directly influence your own success in CS.

"Spatial skills" is a broad term for different cognitive abilities regarding understanding and reasoning about spatial representations and spatial relations between objects and space (so 3D visualization, mental rotation, orientation, block building, etc).
Prior research shows that spatial skills explain why some people learn programming more easily than others. And the great thing is that you can develop your spatial skills with straightforward training sessions – like exercising your muscles in the gym. Many studies have shown that students taking an introductory course in programming who also took part in some spatial skills training saw their grades improve in the course, compared to those who did no training.

We would like to reproduce those studies in a non-introductory programming course this semester. We believe that spatial skills training could be valuable at any point during programming studies, but more especially when the learning becomes more abstract –like in the IN1010 course. So we are going to put in place some spatial skills training in the IN1010 course this semester to confirm our idea and help students improve their programming skills.

We will first invite you to take a 20-minute spatial skills test soon and once more at the end of the semester. Then, depending on your score, you will be invited to join our spatial skills training once a week for approximately 7 weeks, which will take place during one of the weekly group sessions of the course. If you consent to do so, we will also collect your grade obtained the previous semester and the grade you will obtain in the IN1010 course.
We will also ask a few students to be part of a qualitative study across the training to evaluate your experience of the training and improvements in programming.

This project is not meant to give you extra work, it should on the contrary help those that struggle the most to visualize what happens behind the code! We will also take into account your obligatory deliveries and midterm exam when scheduling the training.

If you have any question about the study, the test or the training feel free to contact me (marioho@uio.no), Quintin Cutts (Quintin.Cutts@glasgow.ac.uk -main supervisor of the project) or Ragnhild Runde (ragnhilk@ifi.uio.no -second supervisor).