## 02502 oral exam August 2024

Date: August 19 and August 21.

The exam is scheduled to August 19 and 20.

Remember that you need to be officially signed up for the exam. Please contact the exam office in case of doubts.

To get a time slot in the exam, you need to send an email to rapa@dtu.dk clearly specifying that you are participating in the exam and what date you prefer. Deadline is August 1<sup>st</sup> (you still need to be officially signed up for the exam).

**Type:** Oral exam with internal examiner.

**Details:** As a student, you will be examined in 20 minutes. The first 10 minutes you shall present a topic that is randomly chosen from the list seen below. You should have prepared how to present before the examination. This is followed by 10 minutes questions covering all the learning objectives of the course. There is no preparation time during the exam. All aids are allowed, meaning you can use your computer and notes. However, there is not much time to look at notes during the exam.

We value that you demonstrate an understanding of the different topics and how the methods work and are used. We do not expect you to be able to recite formulas but do expect you have a conceptual understanding of how they work and their limits.

Curriculum and learning objectives: <a href="http://courses.compute.dtu.dk/02502/exam.html">http://courses.compute.dtu.dk/02502/exam.html</a>

## **Topics:**

- 1. Image acquisition, cameras, digital images, file formats, color images, pixelwise operations, principal component analysis (PCA) of data and images.
- 2. Neighborhood Processing, Morphology, line and boundary detection.
- 3. Blob analysis, BLOB classification and pixel classification.
- 4. Geometric transformations, image Registration and shape analysis.