Treasure hunt

(skattejagt)

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1 Introduction

The treasure can only be collected by a registered team. Therefore, it is strongly recommended, that you form a team as soon as possible and inform the teacher about the members by sending an email to him with name and study ID.

This is an introduction to the SIS toolbox, **but you should NOT use this toolbox to solve this treasure hunt.**

2 The secret message

The secret data set contains a motive inside a 3D data set, which is formatted according to the SIS[1] format. The motive is a magic wand (DK: *tryllestav*). The length in whole mm of the magic wand is the combination to a combination lock found on a chest placed not more than 20 m west of building 349. Inside this chest, you will find the treasure.

The secret data is located somewhere below this WEB folder:

`https://home.healthtech.dtu.dk/jw/jwpublic/courses/22481/secret`

You can use the function `load` directly to load the data into MATLAB.

There are different ways to visualize the data. Any (2D) image in the 3D data set can be visualized with `imagesc`. A quick way to visualize the "shape" of the entire 3D data set is to use `isosurface( V, isovalue)`, where `isovalue` is 0.1. It can be a good idea to use `grid on`.

You will have to use the axis information in the data set. The rest of the work requires magic from your fingertips!

3 Resources

You must be familiar with MATLAB in order to solve this problem. In addition, *knowledge* of the SIS toolbox[1] will be useful. Note that it is entirely possible to find the treasure *without* the routines in the SIS toolbox.

4 References

[1] J. E. Wilhjelm: Guide to the SIS toolbox. DTU 2021. See course homepage.