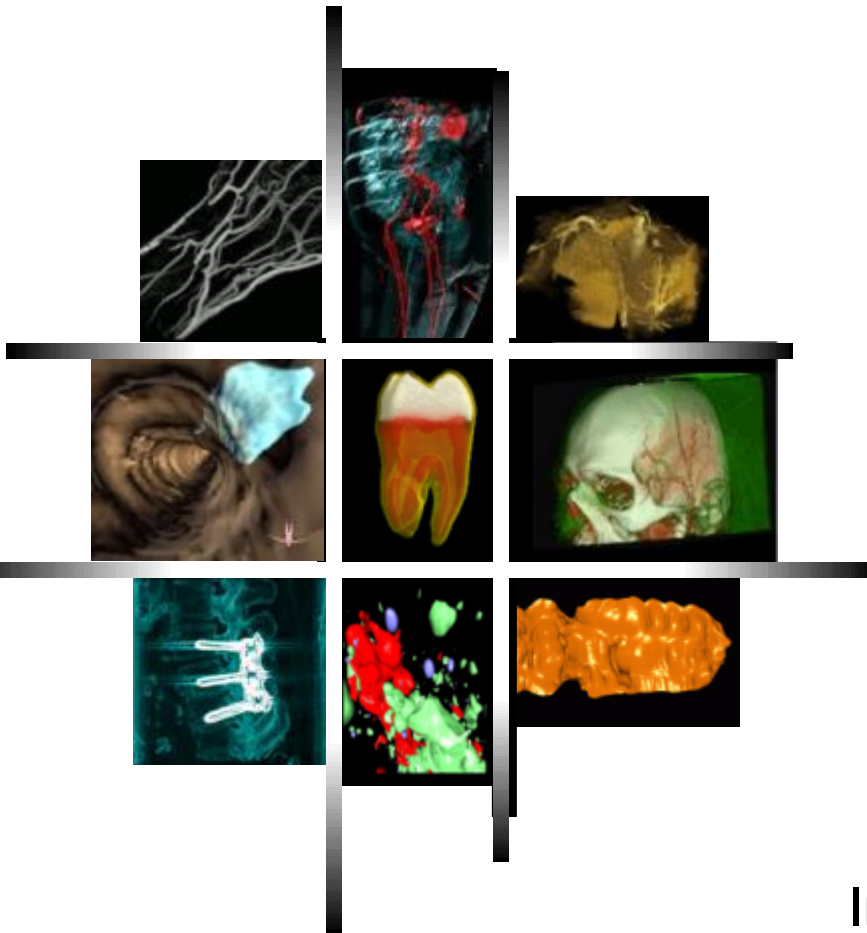


# Übungsteil

## Vorbesprechung



Eduard Gröller  
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Johanna Schmidt  
Oana Moraru

Institute of Computer Graphics and  
Algorithms (ICGA), VUT Austria



- Understanding of the visualisation pipeline
  - ◆ From raw data to
  - ◆ Meaningful visual representation
  
- Two exercises:
  - ◆ Task 1: Pre-processing & Visual mapping
  - ◆ Task 2: Volume rendering



## ■ Lab Framework

◆ Based on *Volumeshop*



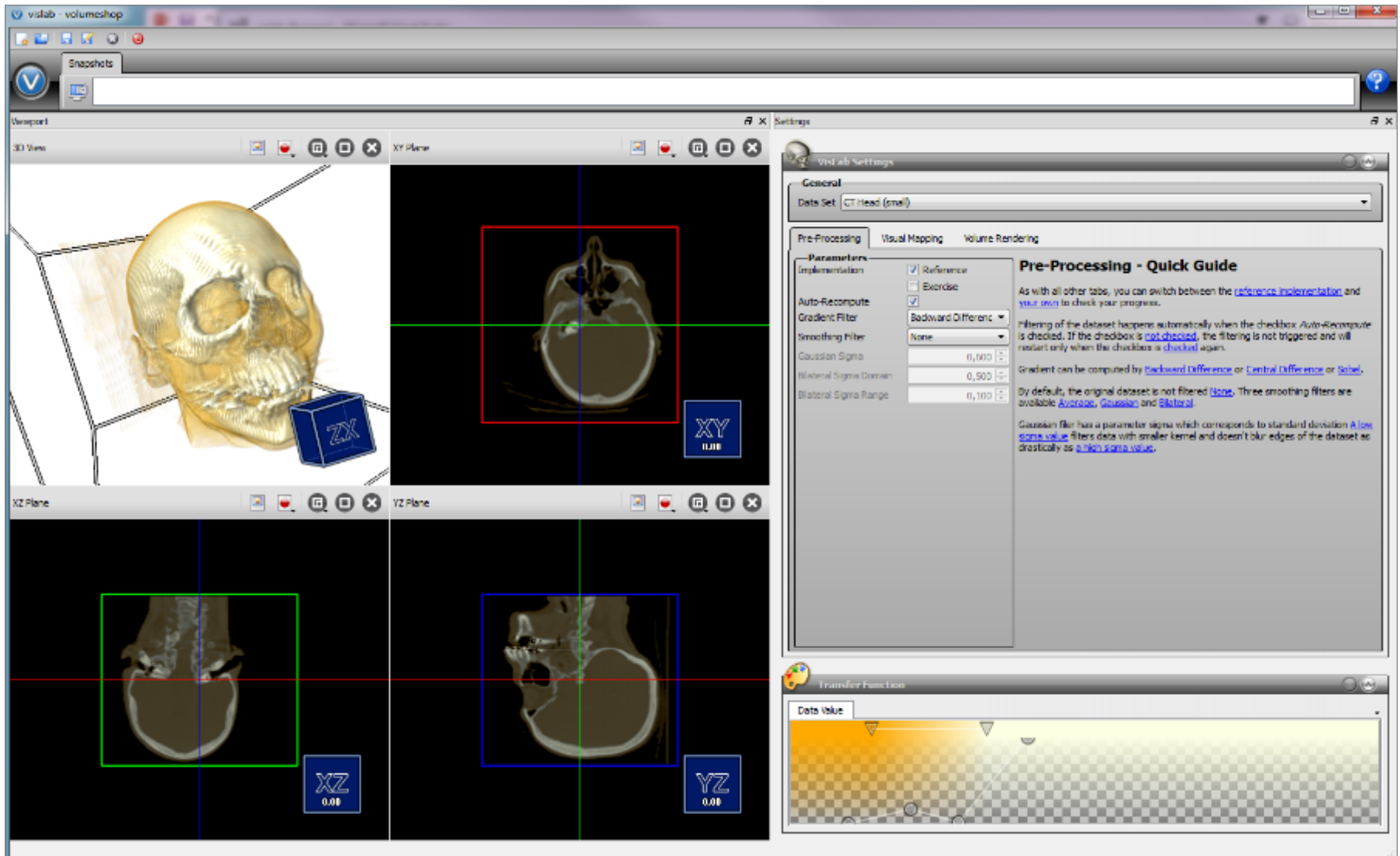
◆ C++ and GLSL

◆ Requirements:

■ Visual Studio 2010/2012/2013

■ graphics card (OpenGL 3.2)



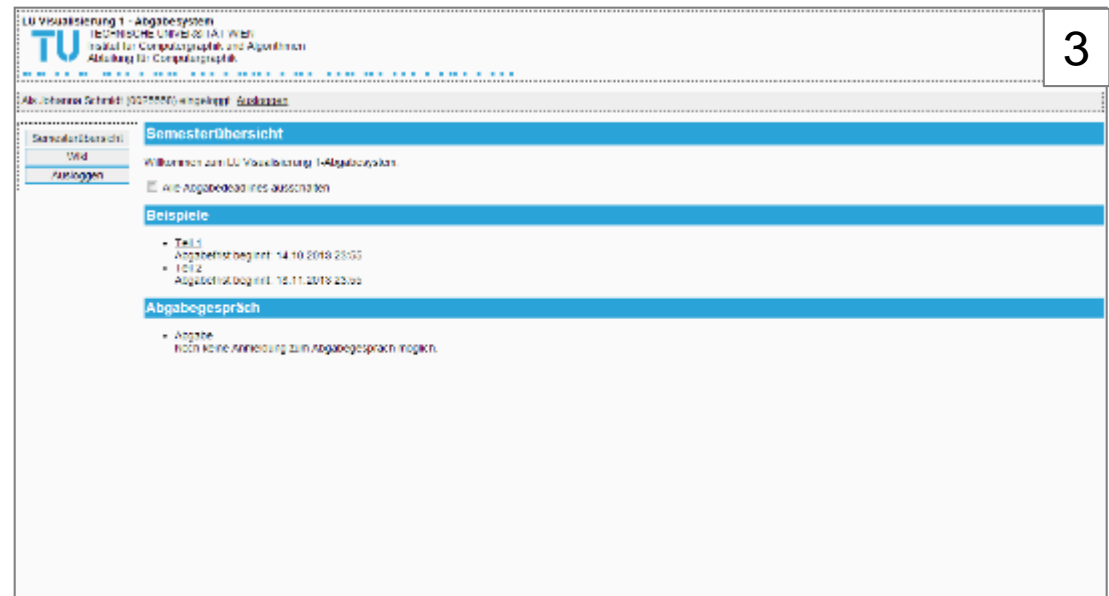
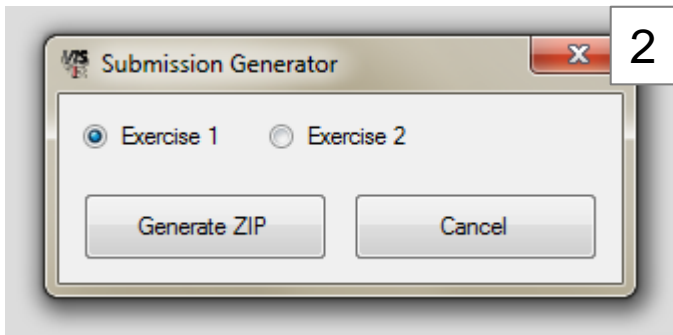
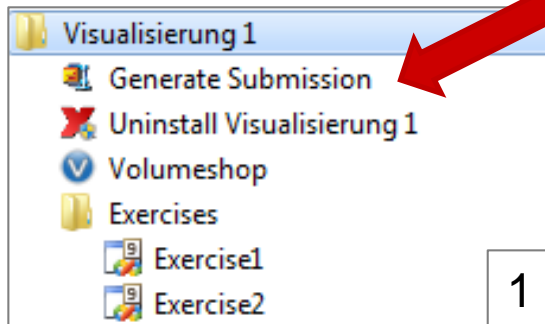


## ■ Exercises based on „TODOs“

```
64 // -----  
65 // TODO 1: Implement Gradient by Central Differences  
66 // -----  
67 // currently backward differences are used for gradient computation  
68 // (same code as in the function above) - this should be replaced  
69 // by the central differences calculation  
70 // -----  
71  
72 float fGradientX = ( CurrentVoxel - MinusVoxelX ).Get(0);  
73 float fGradientY = ( CurrentVoxel - MinusVoxelY ).Get(0);  
74 float fGradientZ = ( CurrentVoxel - MinusVoxelZ ).Get(0);  
75  
76 // -----  
77 // END TODO 1  
78 // -----  
79
```



- Upload ZIP-file to „Vis1 Abgabesystem“
- Use „Generate Submission“ Tool



- Übungsleitung: Johanna Schmidt
- Informatik-Forum
- Tutor: Oana Moraru
- Announcements over TISS



- Both parts (lab-part, exam) need to be positive
- **Lab-part** is graded during „Abgabegespräch“
  - ◆ Questions about source code
  - ◆ Questions about theoretical background
- **Exam** in January (3 questions about lecture content)





- **Registration in TISS:** until 05.11.2014
- **Exercise 1:** 20.10. - 03.11.2014
- **Exercise 2:** 17.11. - 01.12.2014
- **Open Labs:** 23.10. / 20.11.2014
- **„Abgabegespräche“:** 09.12. - 19.12.2014
- **Exam:** Jan. 2015



## ■ **Vis1 Website:**

<http://www.cg.tuwien.ac.at/courses/Visualisierung1/VU.html>

## ■ **TISS:**

<https://tiss.tuwien.ac.at/course/courseDetails.xhtml?windowId=62b&courseNr=186827&semester=2014W>

## ■ **Submission: Vis1 Abgabesystem**

<https://lva.cg.tuwien.ac.at/vis1/>

## ■ **Registration: „Abgabegespräch“ / Exam:**

<https://lva.cg.tuwien.ac.at/anmeldung/>

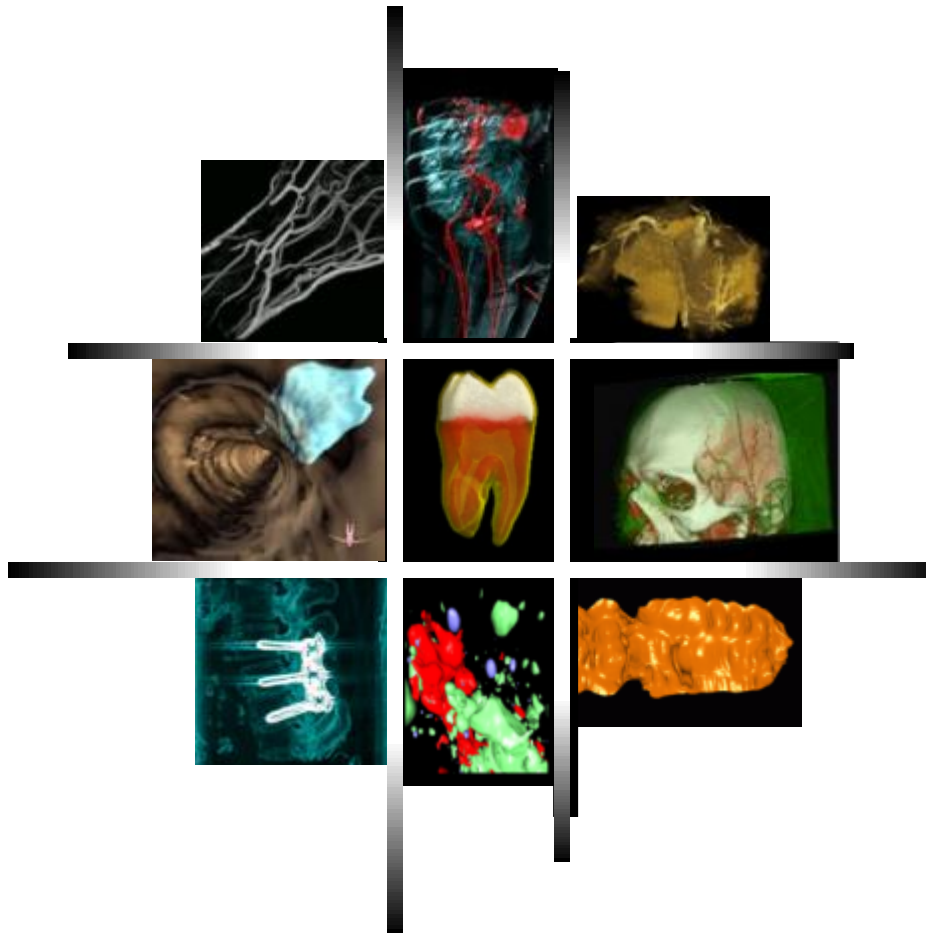
## ■ **Support: Informatik-Forum**

<http://www.informatik-forum.at/forumdisplay.php?341-Visualisierung-1-VU>



# Übungsteil

## Vorbesprechung



**Questions?**

