VU Design and Implementation of a Rendering Engine

Content: Rendering engine internals

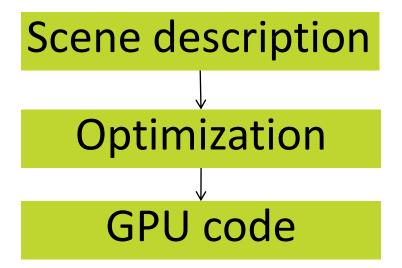
Challenges

- Architectural: how to structure reusable software modules
- Technical: how to use hardware efficiently
- Dealing with tradeoffs: usability vs performance

Topics

- Graphics APIs Insights (OpenGL, Direct3D, Vulkan,..)
- Scene representation, domain specific languages
- performance optimization and data structures
- Systematic performance evaluation





Organization

- 3 ECTS ~ half lecture, half exercise (see TISS):
 - rendering engine component, optimization technique,...
- Tuesday, 13:15 (s.t.)-15:00, Seminarraum 186
- First lecture: 08.09.2024



Background

- Lecturers bring together academic and industry experience
- The lecture combines:
 - State of the art rendering engine architecture and implementation
 - Years of rendering engine development experience (in research and industry)