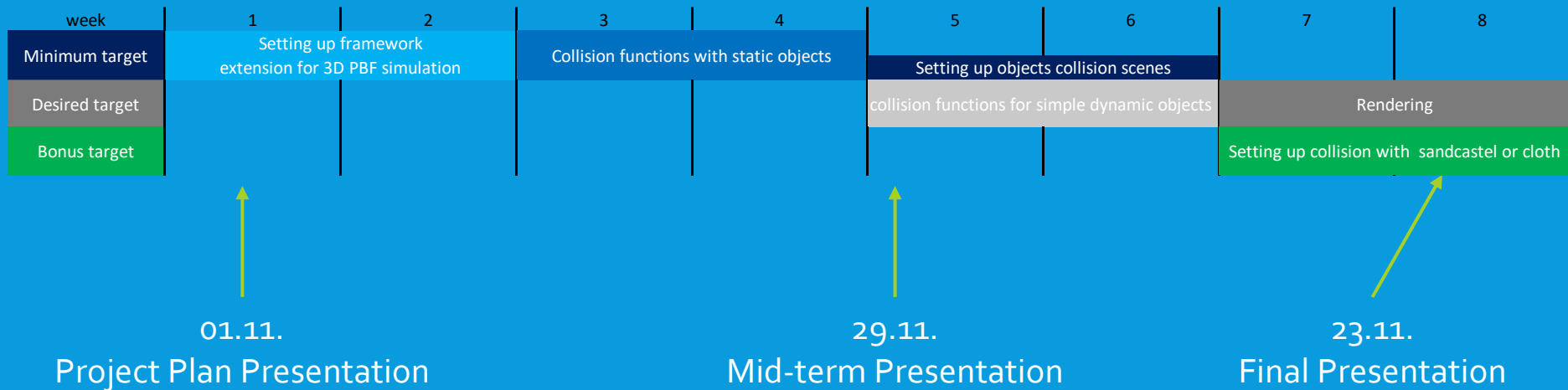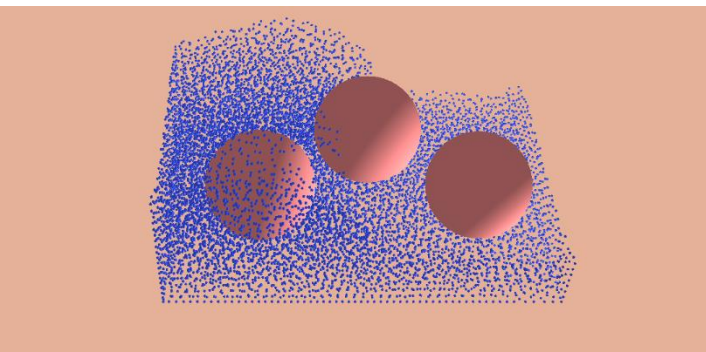# PHYSICALLY-BASED SIMULATION: POSITION-BASED FLUID
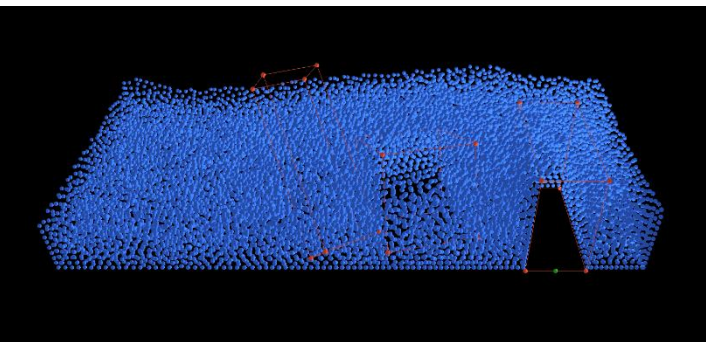
Group 8

Yufeng Xiao, Mingjie Li, Sebastian Heckers

TIMELINE

week	1	2	3	4	5	6	7	8
Minimum target	Setting up framework extension for 3D PBF simulation		Collision functions with static objects		Setting up objects collision scenes			
Desired target					collision functions for simple dynamic objects		Rendering	
Bonus target							Setting up collision with sandcastel or cloth	

01.11.
Project Plan Presentation

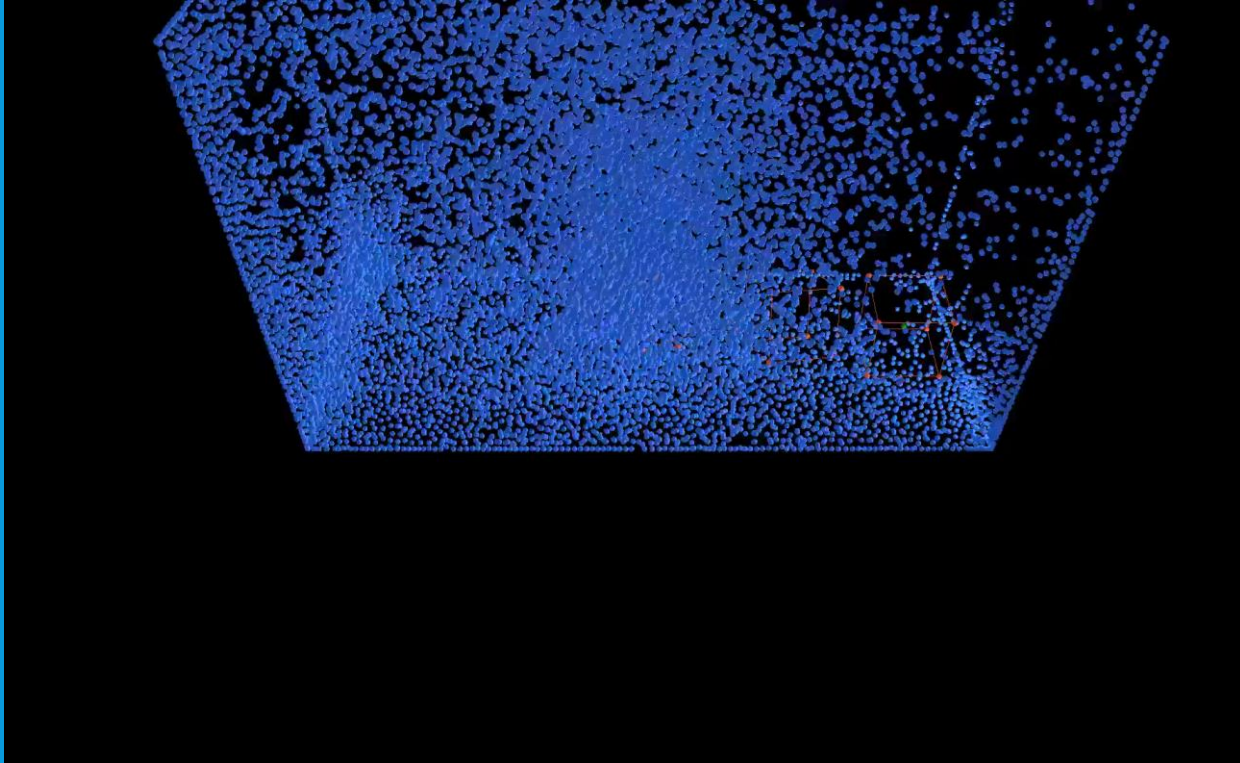29.11.
Mid-term Presentation

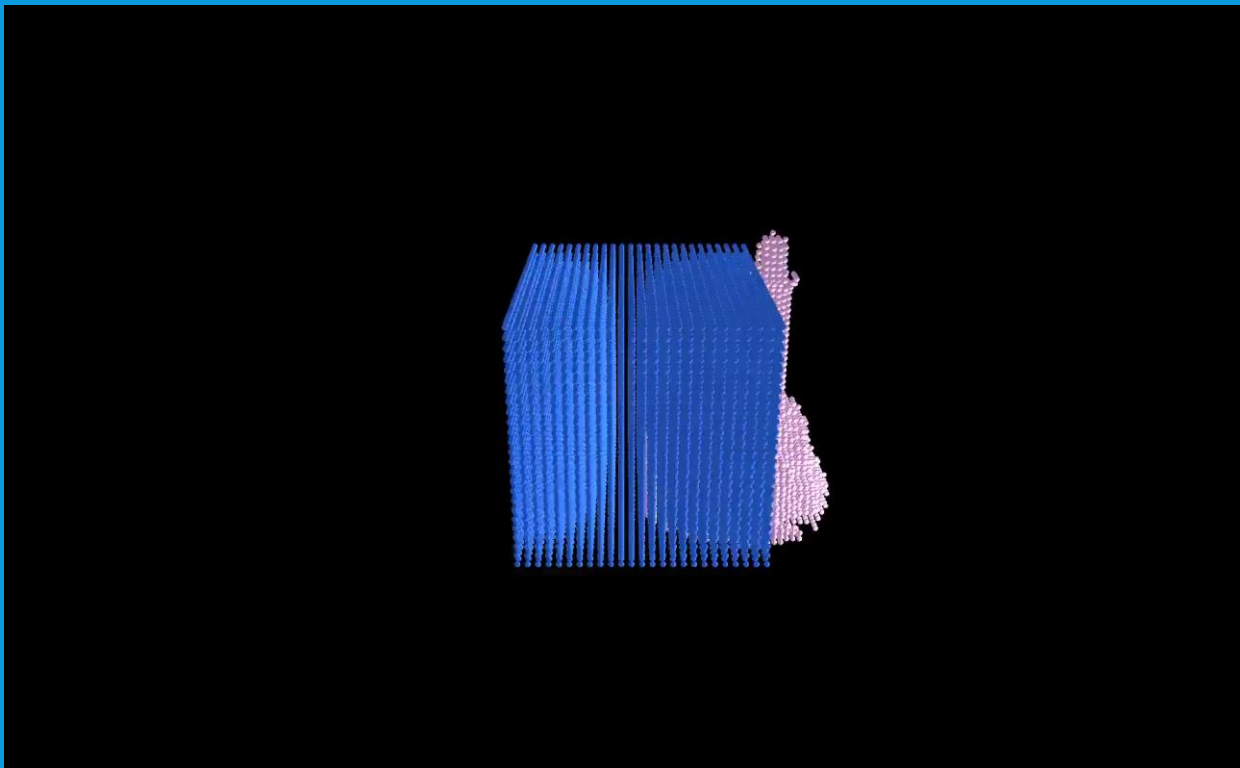23.11.
Final Presentation

PROJECT MILESTONE

Implementation of the minimal target:

- Position-based Fluid
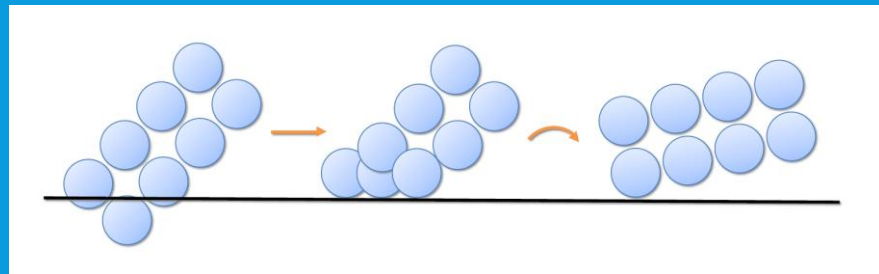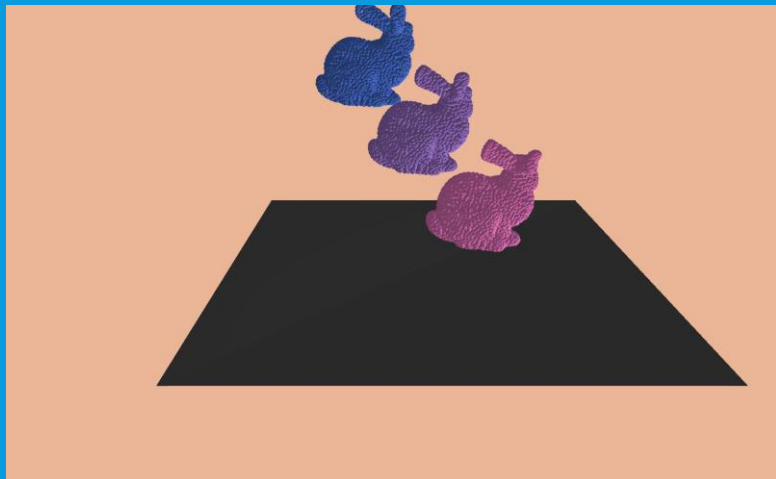- Box collision
- Sphere collision

DYNAMIC COLLISION RESPONSE
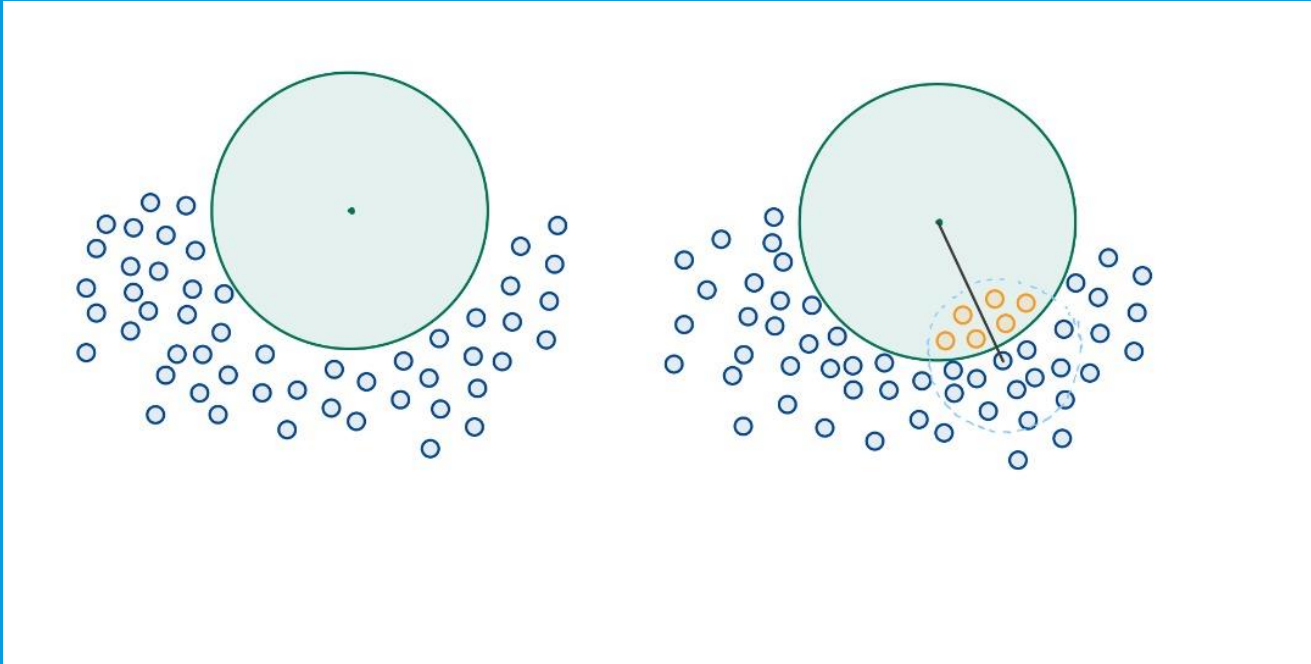
UNIFIED PARTICLE REPRESENTATION

PARTICLE MESH RIGID BODY

MACKLIN M., MÜLLER M., CHENTANEZ N., KIM T.-Y.: Unified particle physics for real-time applications. ACM Trans. (July 2014)

DENSITY ESTIMATION CORRECTION

FINAL RESULT