Projekt GRK 2020/21

**10-minutowe prezentacje teoretyczne, do przygotowania w zespołach projektowych 3-osobowych (29.11.21):**

* Parallax mapping
<https://learnopengl.com/Advanced-Lighting/Parallax-Mapping>
* geometry shader - np efekt eksplozji
<https://learnopengl.com/Advanced-OpenGL/Geometry-Shader>
* Subsurface scattering
<https://developer.nvidia.com/gpugems/gpugems/part-iii-materials/chapter-16-real-time-approximations-subsurface-scattering>
* SSAO
<https://learnopengl.com/Advanced-Lighting/SSAO>

<https://developer.nvidia.com/gpugems/gpugems/part-iii-materials/chapter-17-ambient-occlusion>

* Procedural terrain generation
<https://www.youtube.com/watch?v=wbpMiKiSKm8&list=PLFt_AvWsXl0eBW2EiBtl_sxmDtSgZBxB3><https://www.youtube.com/watch?v=M3iI2l0ltbE><https://developer.nvidia.com/gpugems/gpugems3/part-i-geometry/chapter-1-generating-complex-procedural-terrains-using-gpu>
* Planet atmosphere shader
<https://developer.nvidia.com/gpugems/gpugems2/part-ii-shading-lighting-and-shadows/chapter-16-accurate-atmospheric-scattering>

<http://nishitalab.org/user/nis/cdrom/sig93_nis.pdf>

<https://physics.stackexchange.com/questions/28895/why-is-the-sky-not-purple>

* Hair animation
<https://developer.nvidia.com/gpugems/gpugems2/part-iii-high-quality-rendering/chapter-23-hair-animation-and-rendering-nalu-demo>
* Volumetric fog rendering
[Volumetric Fog Rendering (core.ac.uk)](https://core.ac.uk/download/pdf/237085222.pdf)
* Particle effects
<http://www.opengl-tutorial.org/intermediate-tutorials/billboards-particles/billboards/>
<http://www.opengl-tutorial.org/intermediate-tutorials/billboards-particles/particles-instancing/>
* Water Caustics

[https://medium.com/@martinRenou/real-time-rendering-of-water-caustics-59cda1d74aa](https://medium.com/%40martinRenou/real-time-rendering-of-water-caustics-59cda1d74aa)

<https://developer.nvidia.com/gpugems/gpugems/part-i-natural-effects/chapter-2-rendering-water-caustics>