Talk Title:

Shadow Mapping in Real-Time 3D Graphics

Abstract:

Real-time 3D graphics are a key aspect of many fields nowadays, such as modern computer games. These aim to achieve a level of realism that would not be possible without the presence of shadows caused by directional and point lights. However, due to the nature of the rendering pipeline, special techniques must be used to be able to render images with shadows.

In this talk, I will introduce the main technique used nowadays: Shadow Mapping. We will go through the idea behind Shadow Mapping and how it is implemented, discussing the possible artefacts that may occur and how to mitigate them. I will conclude with an interactive demo visualising the different parts of the process.