

Pagoda on the Li River

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Motivation and Story

Reference image:



I wanted to create a scene with water and reflectivity, but I also just wanted to create something beautiful. My family is Buddhist and we visited the Li River (漓江) a few summers ago, so my scene is intended to be an ode to that trip.

Assets

- Textures
 - Water, sand, rock, and pagoda / walkway cover textures were all found online
 - Background plane image was downloaded online:
<https://pixabay.com/photos/china-yangshuo-li-river-boat-1319461/>
 - I took pictures of random green leaves to texture the trees
- Objects

- The trees, walkway covers, and rocks are objects found online (TurboSquid)
- I downloaded a model for the roof of the pagoda, which I used to construct the pagoda in the scene
- I modeled the sand

Lighting

- I used two area lights to illuminate my scene, which I wanted to be as bright as daylight, but with a smooth ambient effect since the bulk of my scene is “in the shadows”
 - One placed in front of the water, nearly-parallel with the sand
 - One placed behind the camera to add some light to the darker walkway and trees
- I used a directional light to emphasize the light coming from the setting sun (outside of my scene)

Technical Implementation

- I created a normal map for the water texture using the web tool: <http://cpetry.github.io/NormalMap-Online/>
 - Implemented in .mtl file
- Modified files
 - Assignment7.cpp: loaded own scene, set reflectivity / transmissivity values
 - common.h: increased LARGE_EPSILON to remove shadow acne
 - BlinnPhongMaterial.h/.cpp, Material.h/.cpp: removing minor shadows on background plane