

CT5202: Photorealistic Rendering

Introduction

Lecturer: Bochang Moon

About Me

- Assistant professor in Institute of Integrated Technology at GIST
 - Graduate Program of Culture Technology
 - Joined GIST in Sep. 2016
- Post-Doctoral researcher at Disney Research (Nov. 2014 – July 2016)
- Ph.D from KAIST (Feb. 2008 – Aug. 2014)
- Main research topics:
 - Computer graphics
 - Rendering, denoising, ray tracing

Information

- Instructor: Bochang Moon
- Email: bmoon@gist.ac.kr
- Office: 106 Dasan Building

- Office hours
 - Right after the class time or by appointment (via email)

- Class time
 - 2:30 – 4:00pm on Mon. and Wed.

Rendering

- Rasterization based pipeline
 - Real-time applications (3D games)
 - Covered in computer graphics course (CT 5510)



Rendering

- Ray tracing pipeline
 - Offline applications (animations, CG movies)



Ray Tracing Examples



<http://www.pbrt.org/>

Ray Tracing Examples



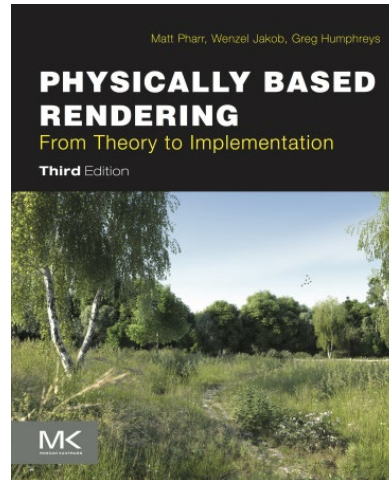
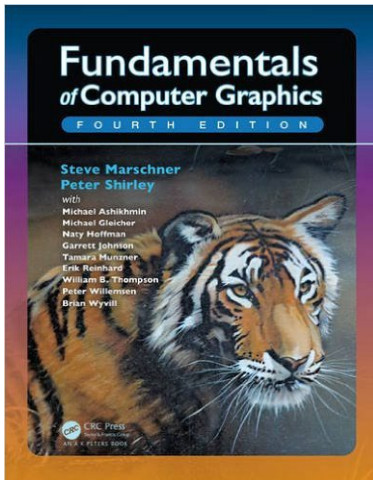
<http://www.pbrt.org/>

Course Overview

- Provide fundamental concepts of photorealistic rendering
 - Background for rendering
 - Ray casting & tracing
 - Monte Carlo integration, Monte Carlo ray tracing methods
 - Variance reduction techniques
- Paper presentations
 - Sampling, Reconstruction, Light transport algorithms, Denoising, Volume rendering, and Other related topics

Textbook and References

- Book



- Papers

- <http://kesen.realtimerendering.com/>
- SIGGRAPH, SIGGRAPH Asia, etc.

Grading

- Paper presentation (two papers per student): 30%
- Attendance: 10%
 - No absences: 10, One absences: 9, Two absences: 7, Three absences: 4
 - Four or more absences: 0
 - Late two times: one absence
 - I will call your name at the beginning of the class
- Final exam: 60%

Prerequisite for This Course

- Basic knowledge of computer graphics
 - E.g., Computer Graphics [CT4201/EC4215] or similar courses