

CS 7650 Realistic Image Synthesis Homework 2 (Due Tu May 24)

Use Monte Carlo integration to estimate the integral:

$$\int_0^{\frac{\pi}{2}} \sin^3 x + \cos^3 x \, dx$$

Use 100 samples with

- unstratified uniform random sampling
- stratified uniform random sampling
- stratified importance sampling with density proportional to x^2 .
- stratified importance sampling with density proportional to $(\frac{\pi}{2} - x)^2$.
- stratified importance sampling with a density that is the average of the last two.

Give your results on a web page that you will keep for the whole class.