CAP6701 Project 1 Sampling and Warping: Due February 19th

This is a **Nori 2** Project:

In this exercise you will generate sample points on various domains: disks, spheres, hemispheres, and a few more. The Nori2 code base has interactive visualization and testing tools to make working with point sets as intuitive as possible. Note that all the work you do in this assignment will serve as building blocks for later assignments when we apply Monte Carlo integration to render images.

Please note that Nori 2 is an instructional ray tracer used by several universities. The specific exercises you will complete for **project 1** are listed as Assignment 1: Getting Started and Assignment 2: Sampling and Warping at this link:

https://graphics.ethz.ch/teaching/cg15/www-nori/index.html#

Details:

Following the instructions for as Assignment 1: Getting Started and Assignment 2: Sampling and Warping, you will:

- Produce a correct implementation of the hierarchical sample warping algorithm.
- Create a modified version of the warptest user interface that visualizes your generated points sets.
- Perform Math Processing Error tests (with many input points), which verifies that your warping function and density function are mutually consistent. You will use two images; the simple Math Processing Error pixel image provided, and then any light probe you choose (See links to free datasets). Feel free to change the resolution of your input image to a power of 2 using a tool of your choice.

What to submit

You will submit a zip file with **your full source code tree and a written report**. Use the Nori2 submission document template uploaded to canvas to create the written report. The template provided gives additional guidance on the specific results you should generate.