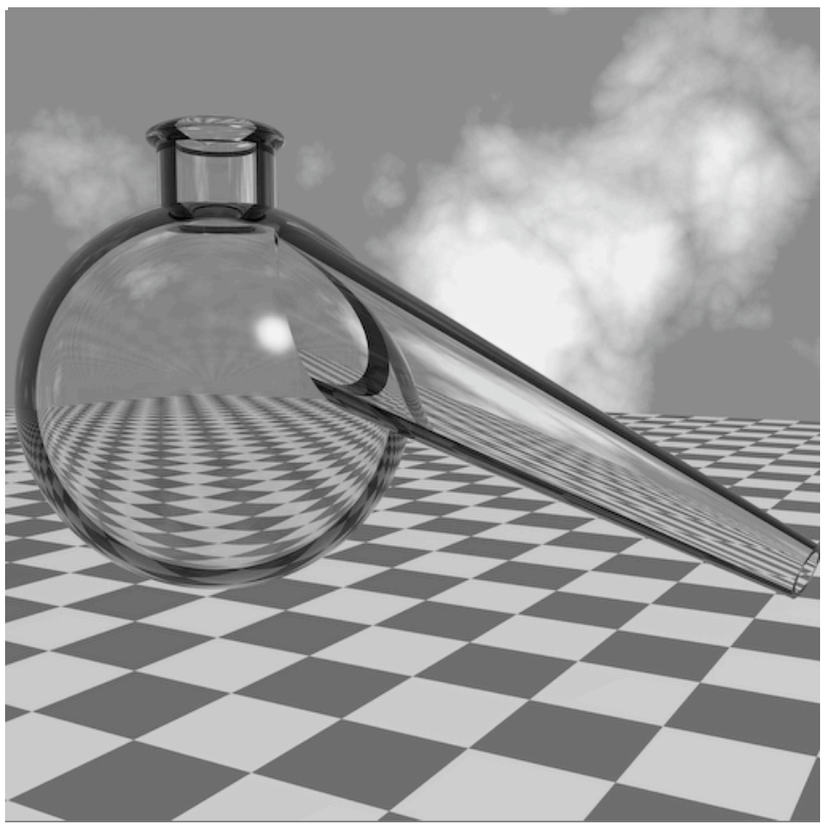
Sampling & Reconstruction I

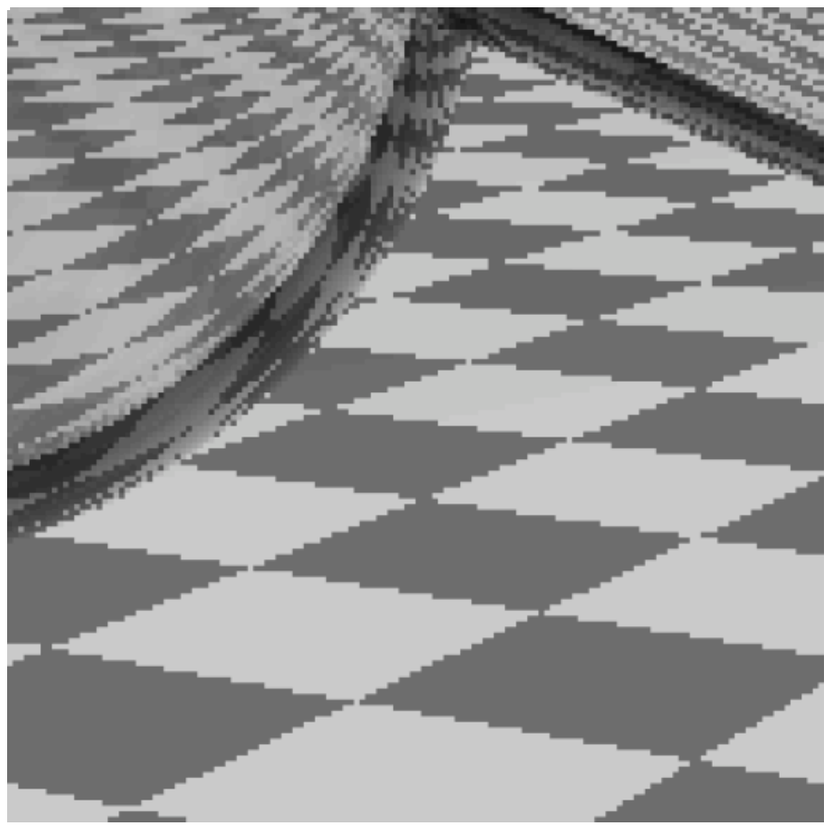
cs348b

Matt Pharr

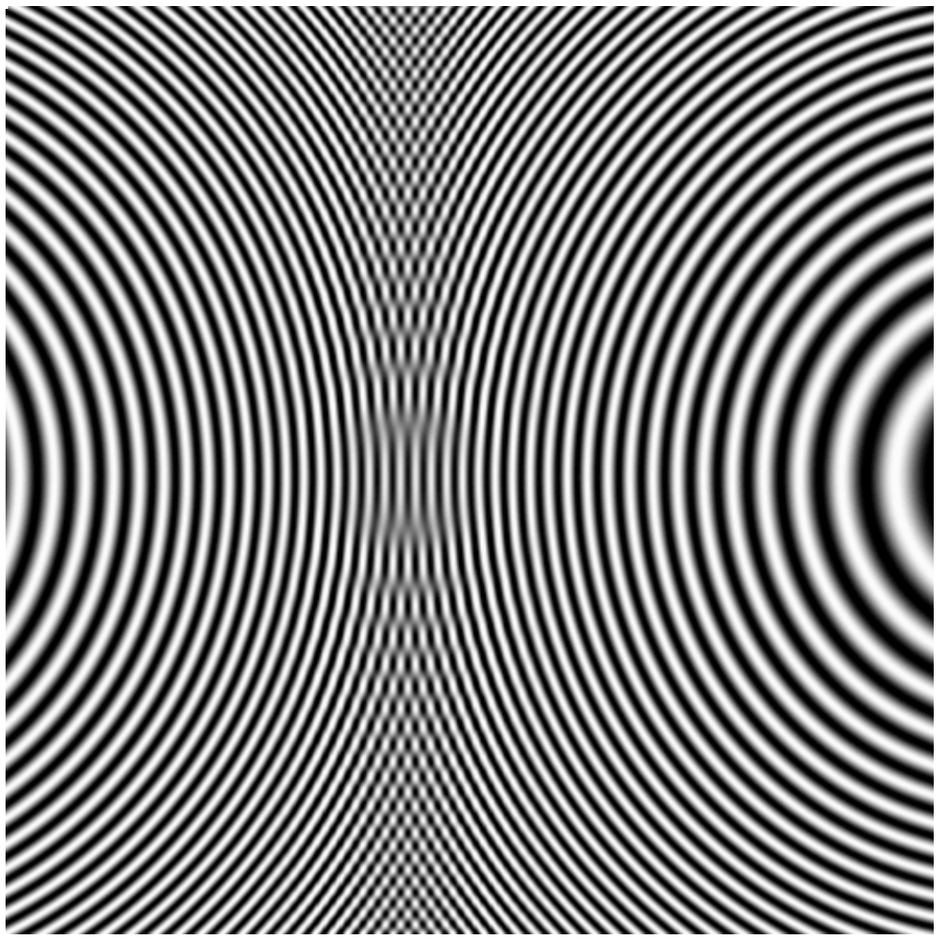
Jaggies

- Don Mitchell

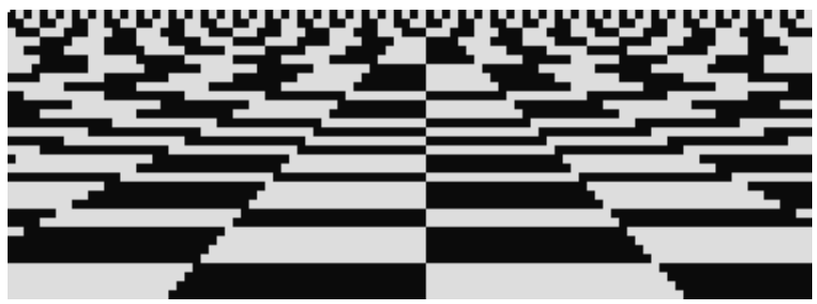


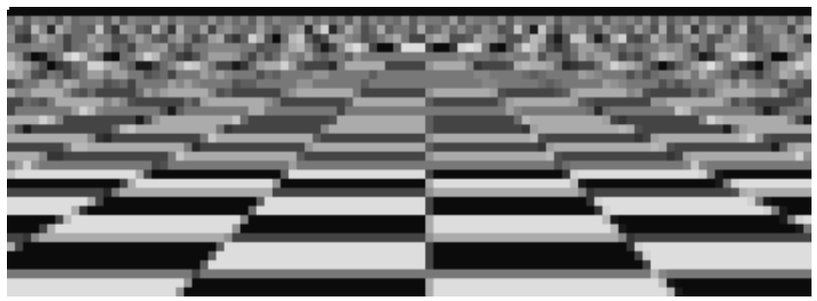


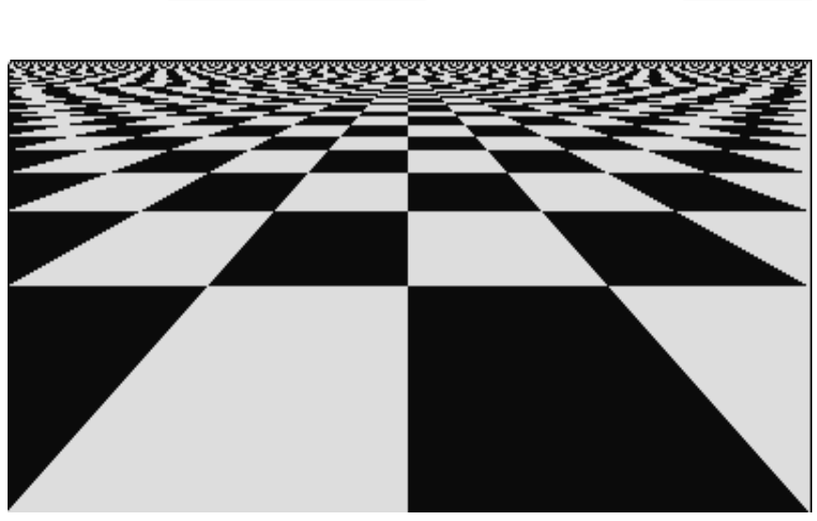
Sampling a “Zone Plate”

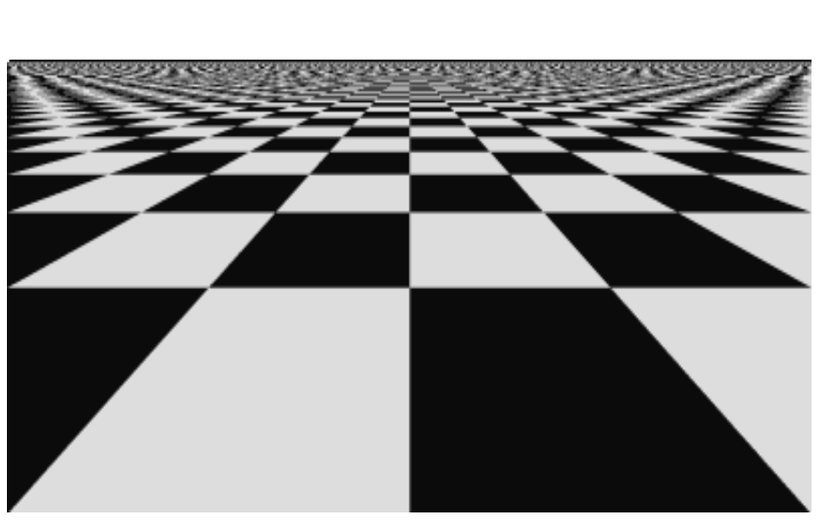


Point vs. Supersampled



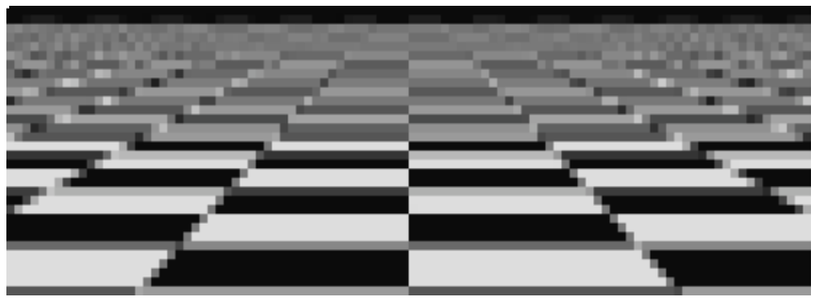


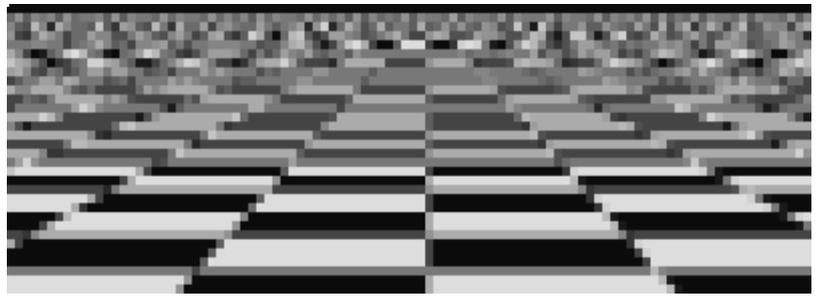


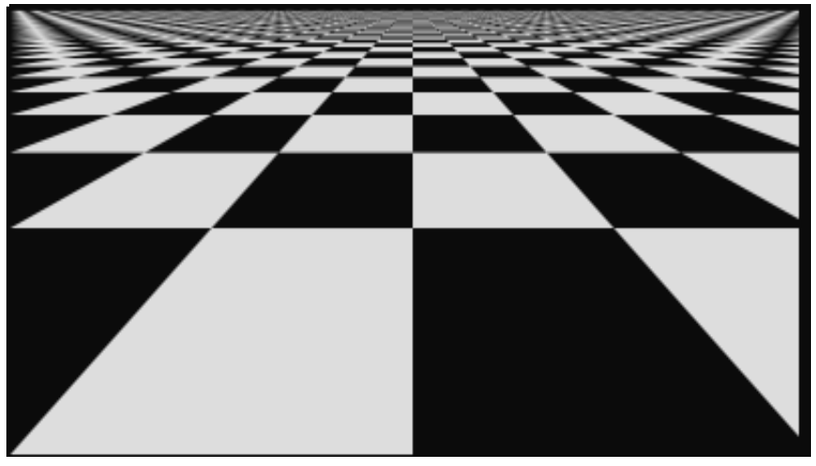


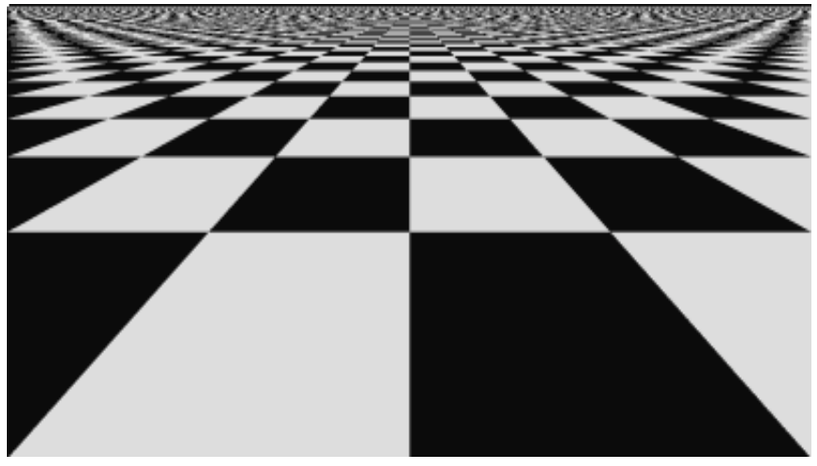
Tom Duff

Analytic vs. Supersampled



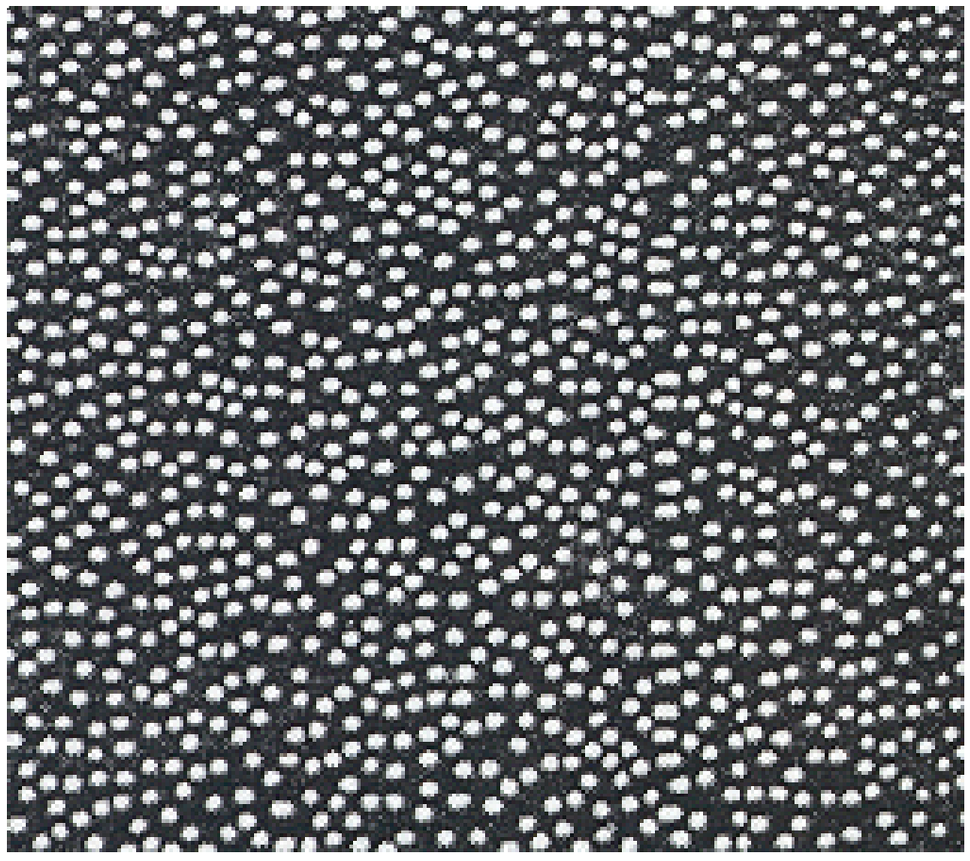




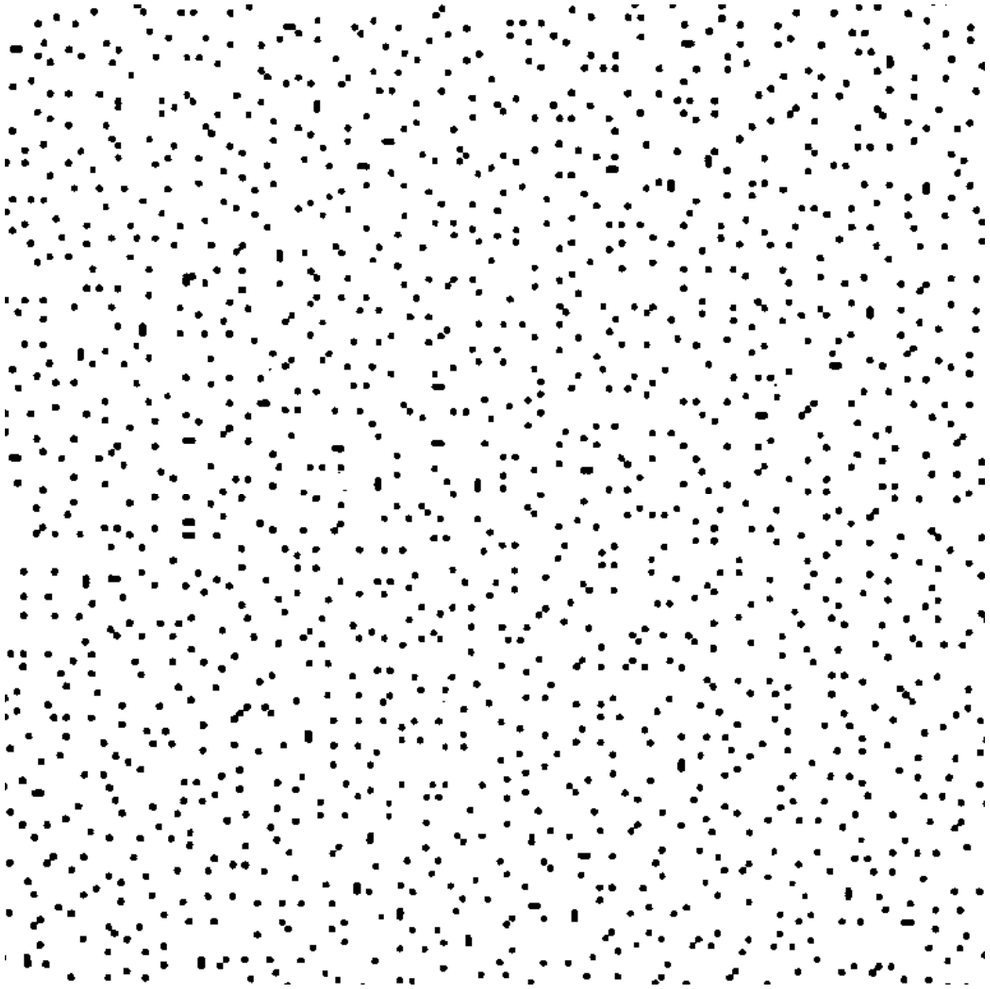


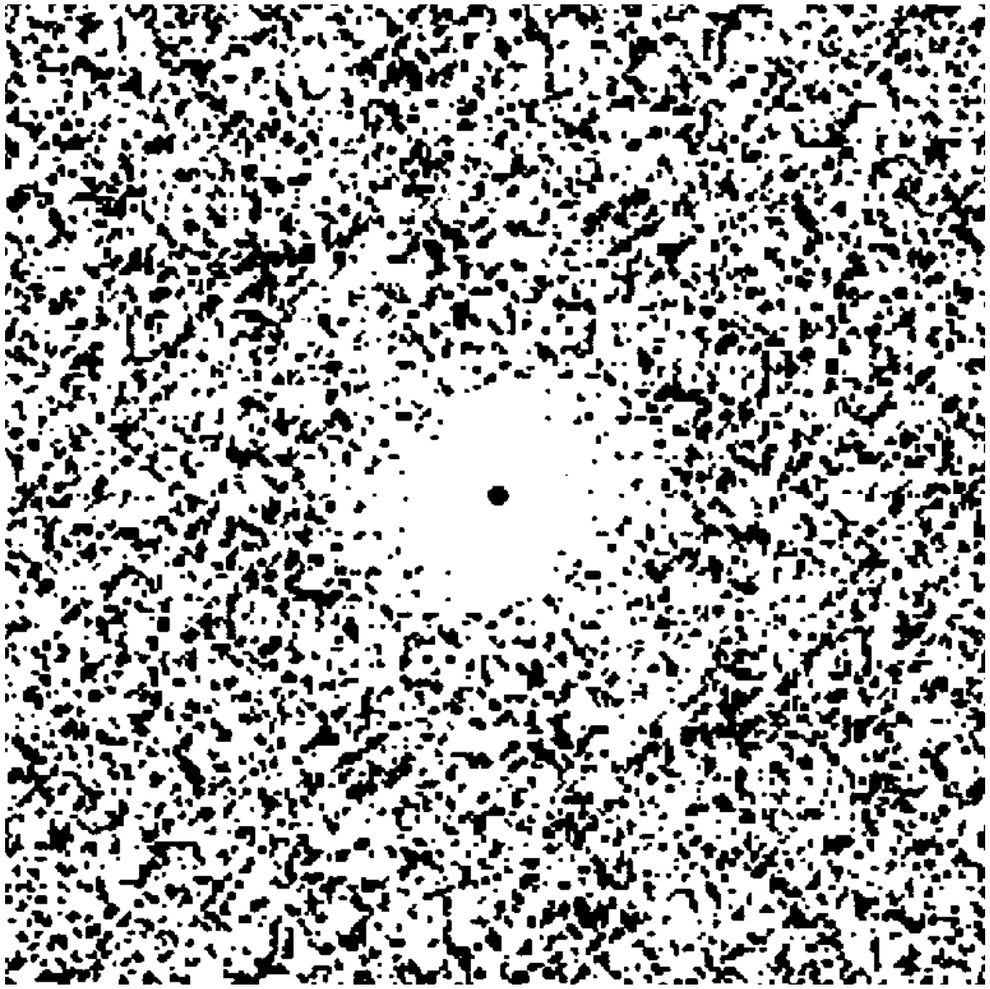
Blue Noise Patterns

- Yellot, '83: monkey eye photoreceptor pattern. Aliases replaced by noise

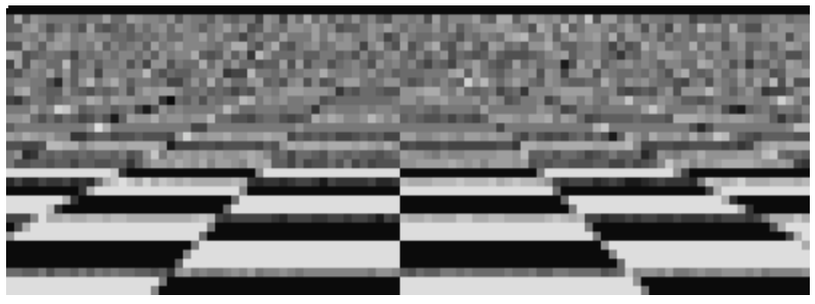


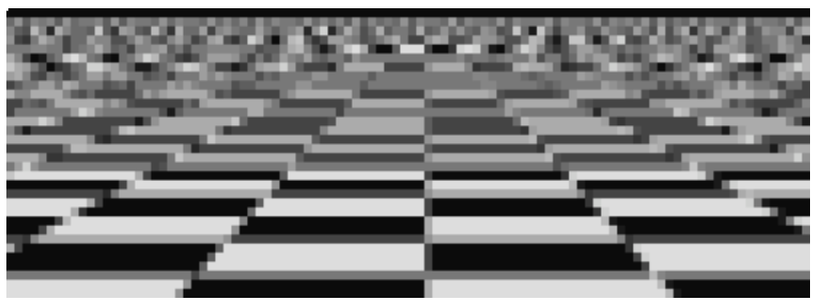
Jittered Sampling

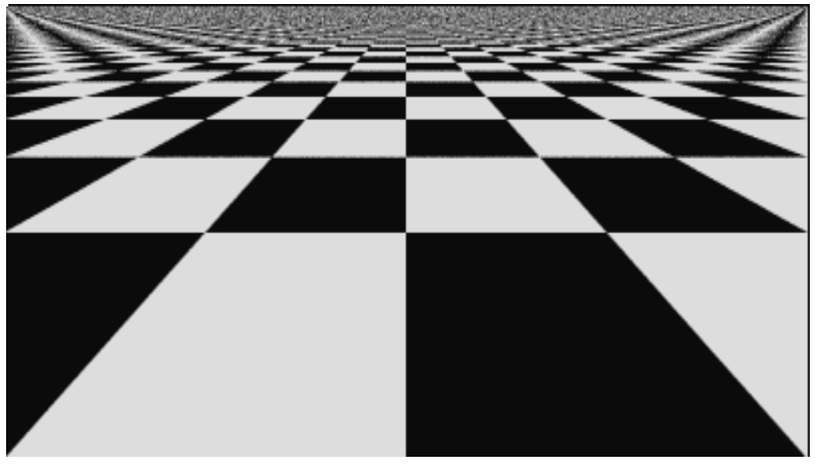


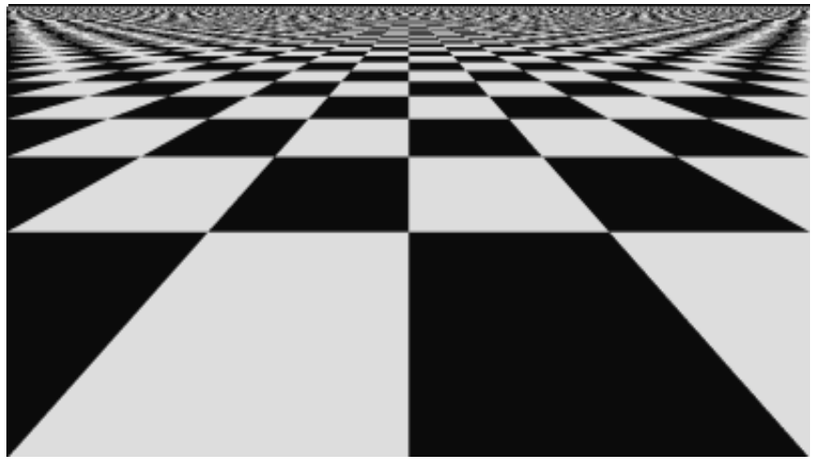


Jittered vs. Uniform Supersampling

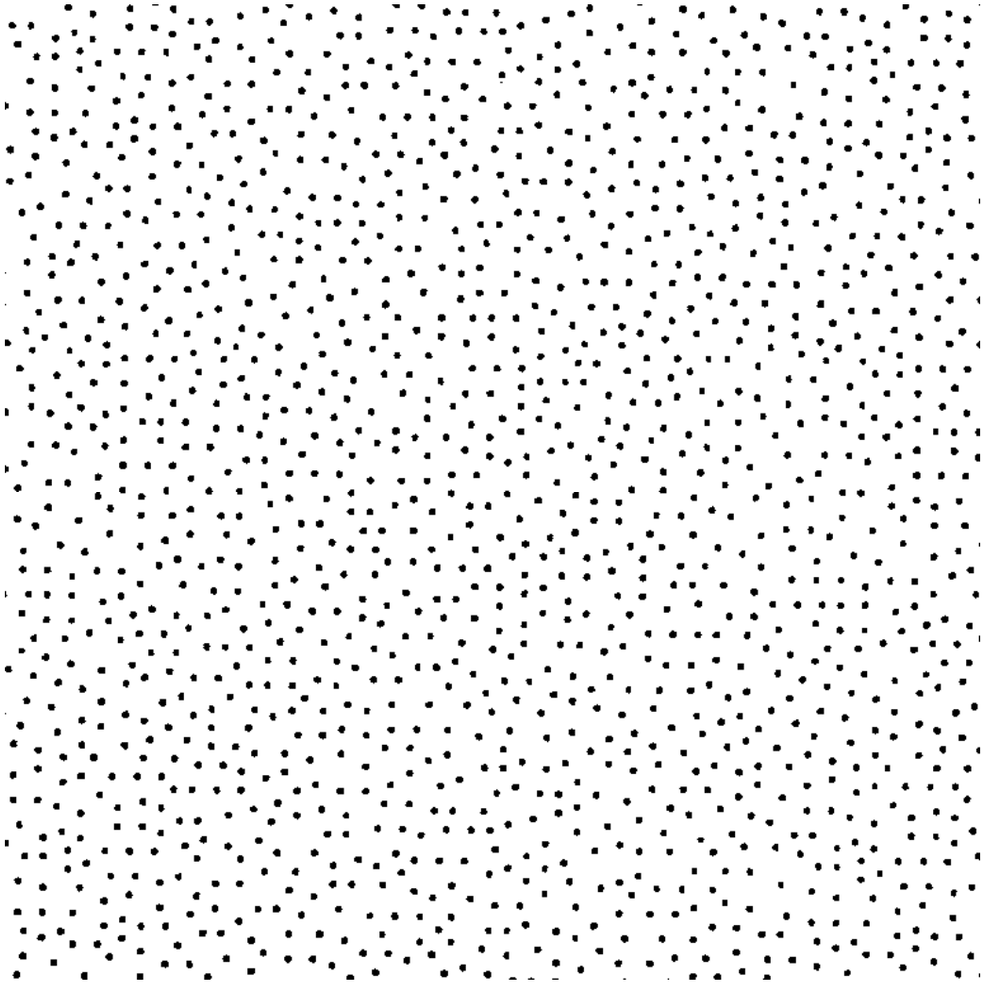


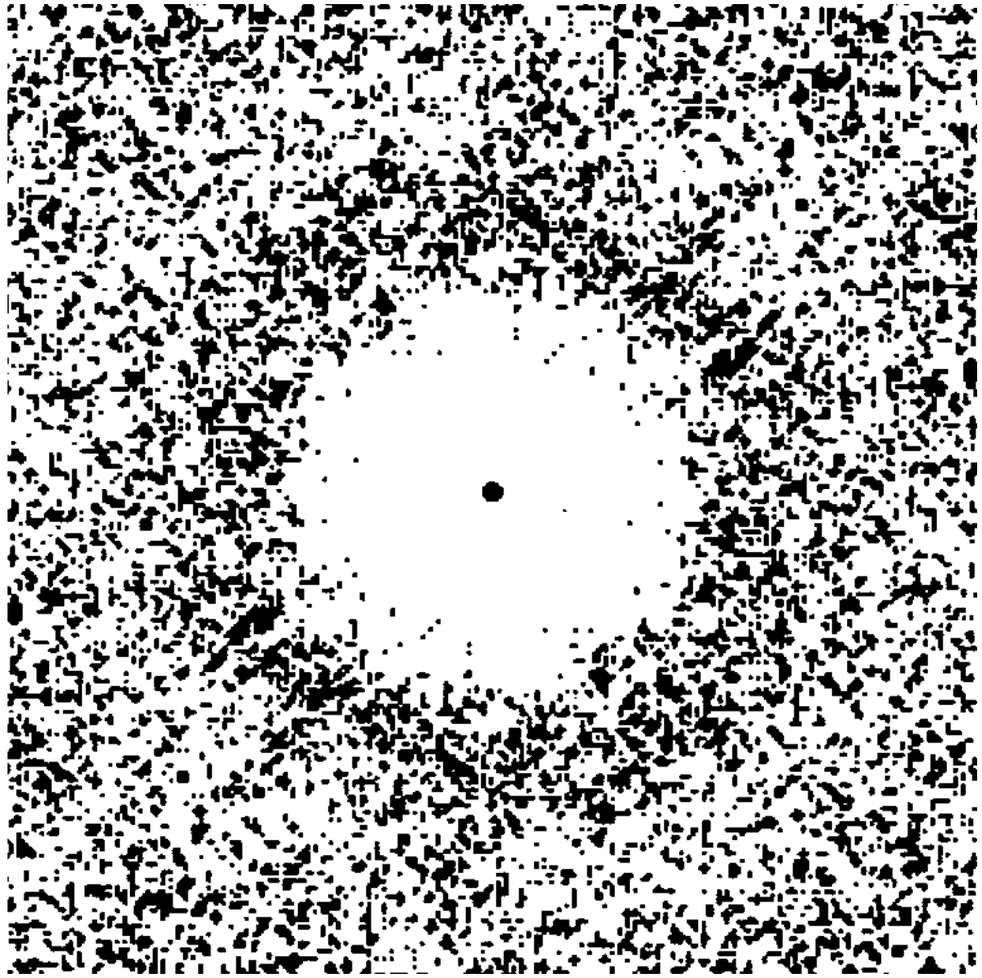






Poisson Disk Sampling



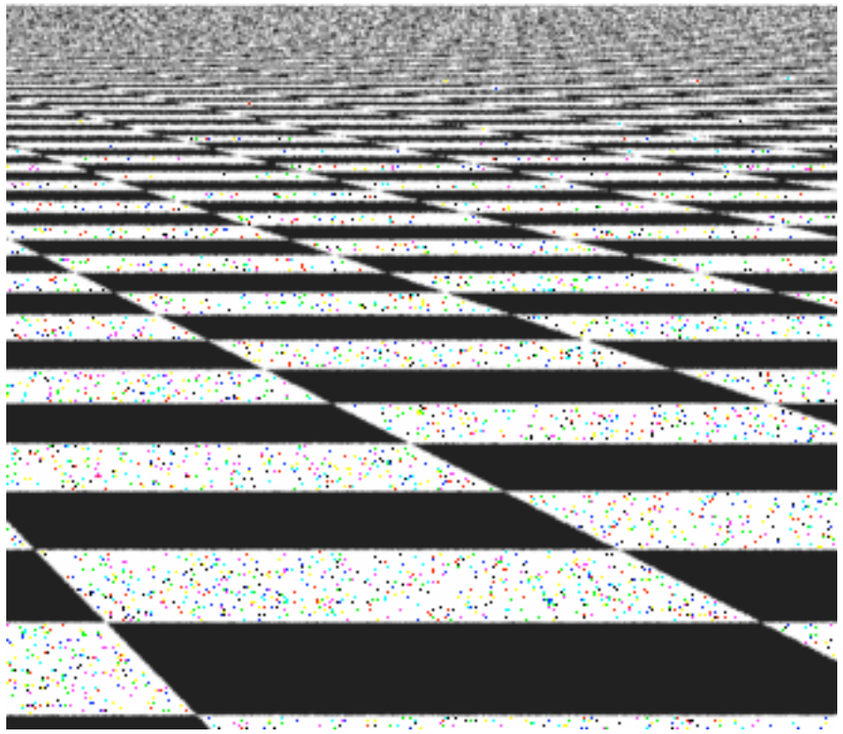


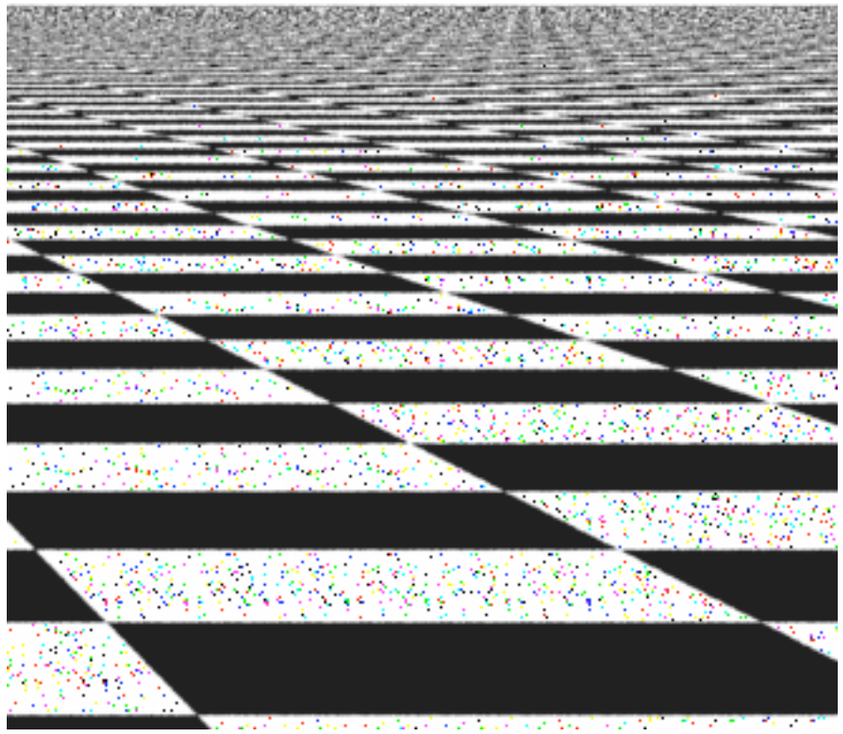
cs348b

Matt Pharr, Spring 2003

Examples

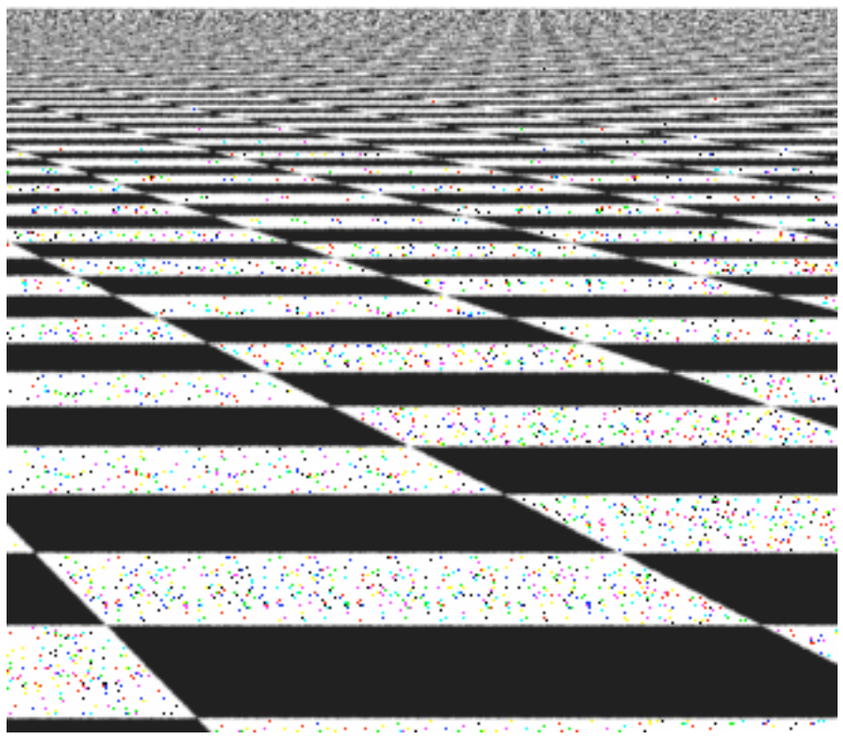
- Jittered vs. Poisson Disk

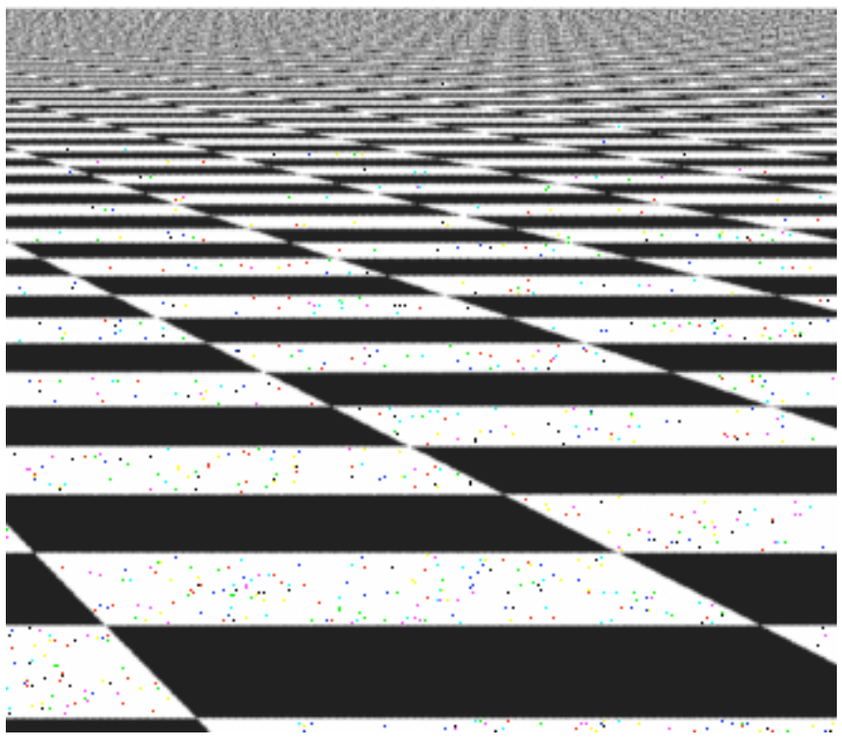




Examples

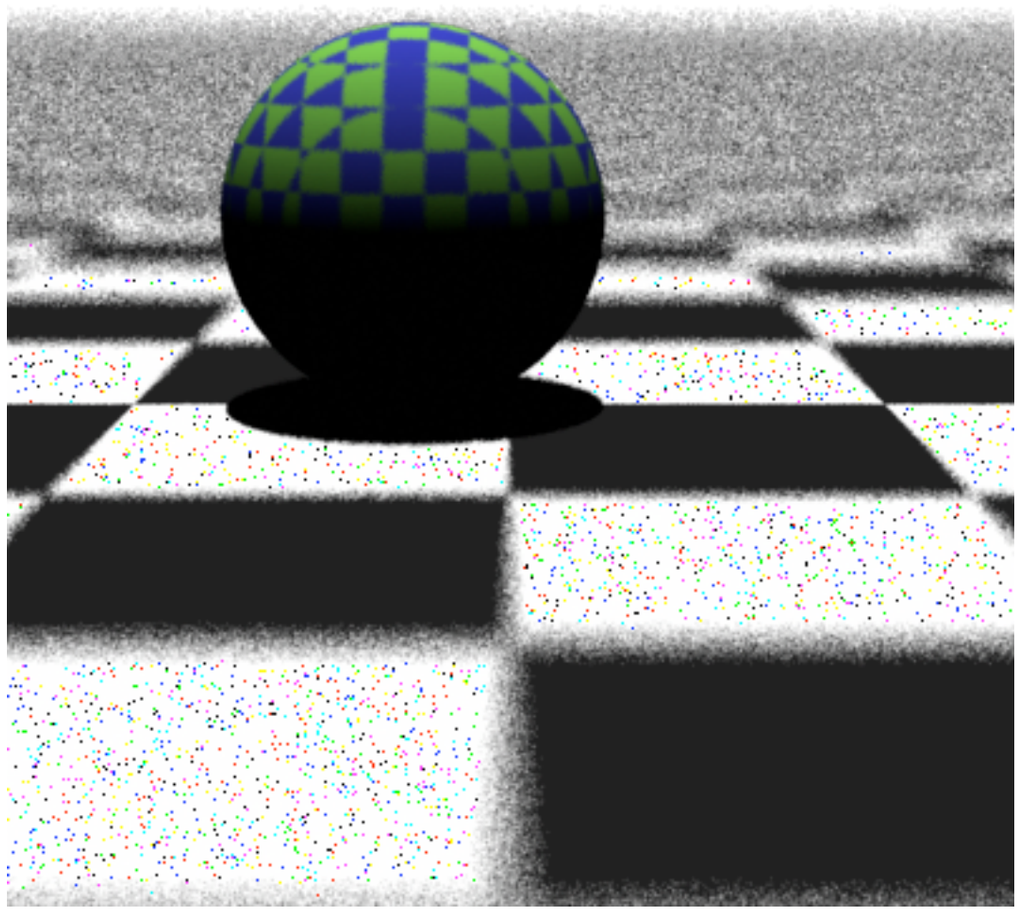
- Poisson Disk vs. Low Discrepancy

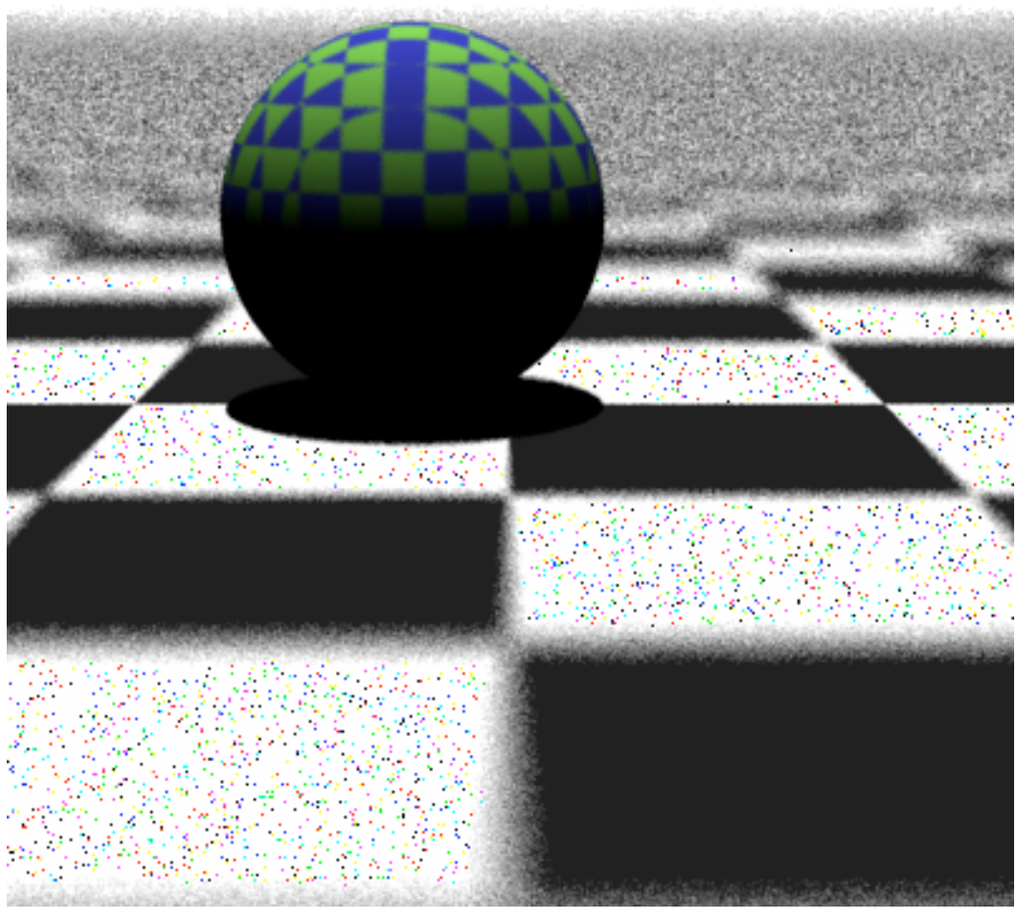




Depth of Field

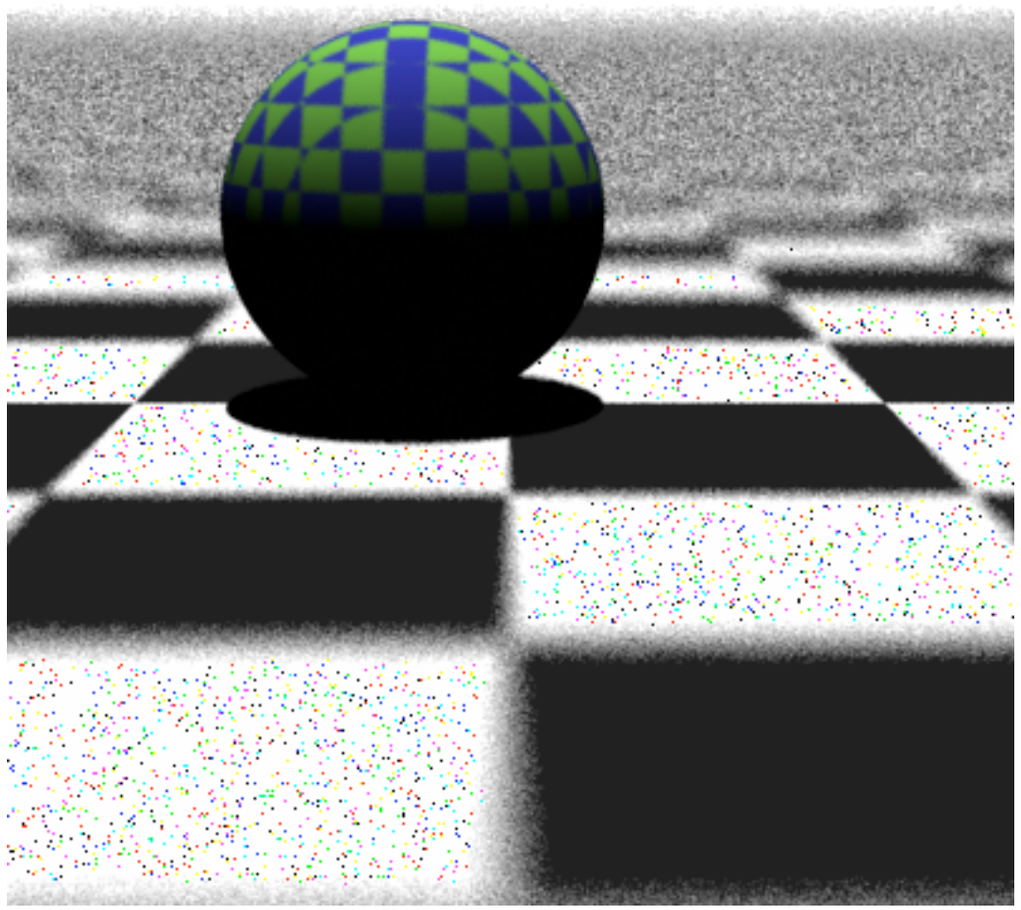
- Jittered, random vs stratified lens samples

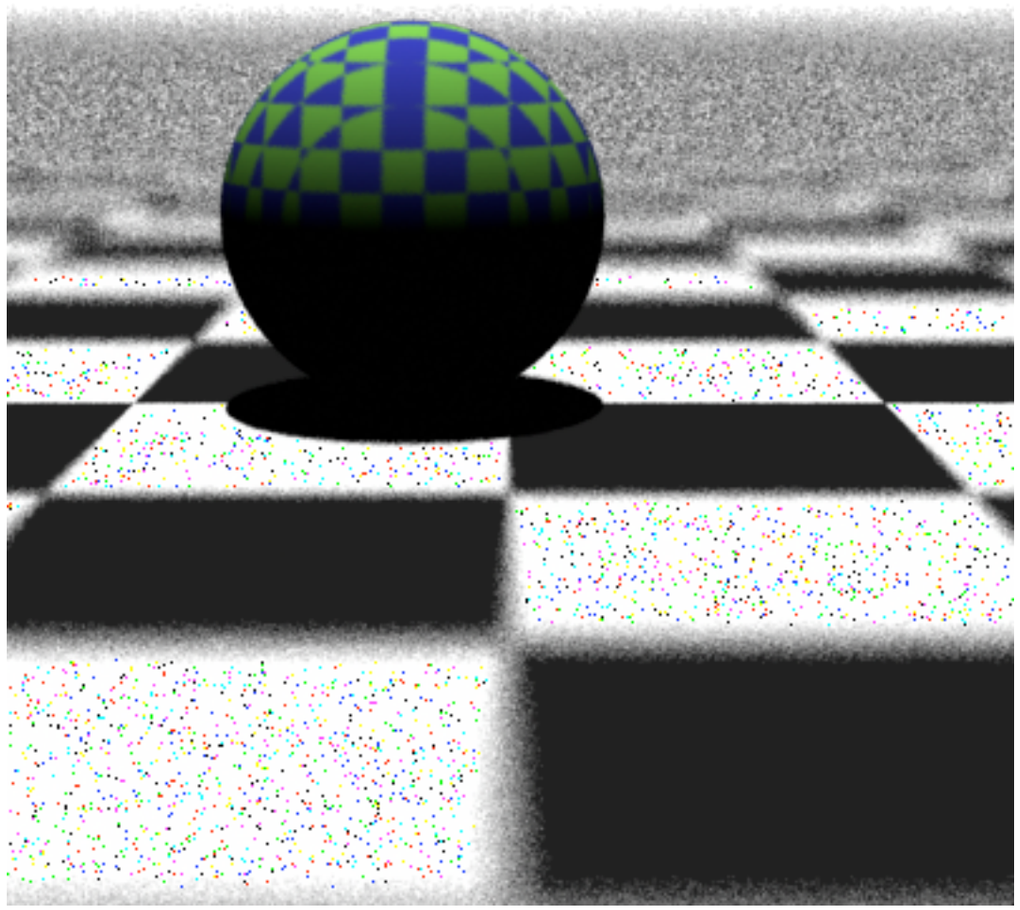




Depth of Field

- Jittered vs Best Candidate





Depth of Field

- Best Candidate vs Low Discrepancy