

# Final Project of Computer Graphics (Official version)

$$I_\lambda = I_{a\lambda} k_a + \sum_{1 \leq i \leq m} S_i [k_d L_{d\lambda} (l \cdot n) + k_s L_{s\lambda} (r \cdot v)^n], S_i = \frac{1}{a + b d_i + c d_i^2}$$

# Final Project Statement

To Implement an algorithm for global illumination models

- 1) ambient, diffuse, specular light and shadows must be taken into account
- 2) transparency and refraction are optional (the last two terms in the formula)

- 3) Polyhedral and spherical objects should be included (at least includes one cylinder, one sphere, one polyhedron and two light source)
- 4) Existing graphics packages or libraries, e.g., OpenGL or D3D, are encouraged to be used, but only basic functions, like primitive drawing, vertices array, matrix operation and color feature, are allowed to be used in your work.
- 5) Program should run well in Windows/Ubuntu PC.

# The following materials should be submitted:

- 1) Original source code
- 2) Executable files
- 3) Documentations
  - explanation text file for your code and configuration, e.g. types of light sources, constant coefficients you chose etc.
  - illustrate the method you use, problems you encounter and the experimental results

# The following materials should be submitted:

- 4) Email for submission: [cg\\_sjtu@126.com](mailto:cg_sjtu@126.com)
- 5) Deadline: 2018 July 15<sup>th</sup>

**Attention: Late submission will be scored less grade.**

# Examples of the output:



Chess



Metal Ring



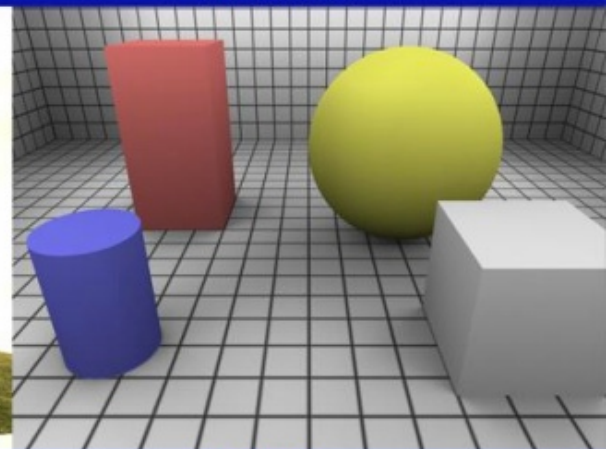
Tableware



Balls



Sunlight



Abstract

## Examples of the output:

