#计算机
#计算机图形学

这是我的个人笔记，所以会比较侧重于我所关注的重点，可能会和老师课上讲述的内容有些许不同，这是阅读这篇笔记时一定要注意的问题

Basic Information

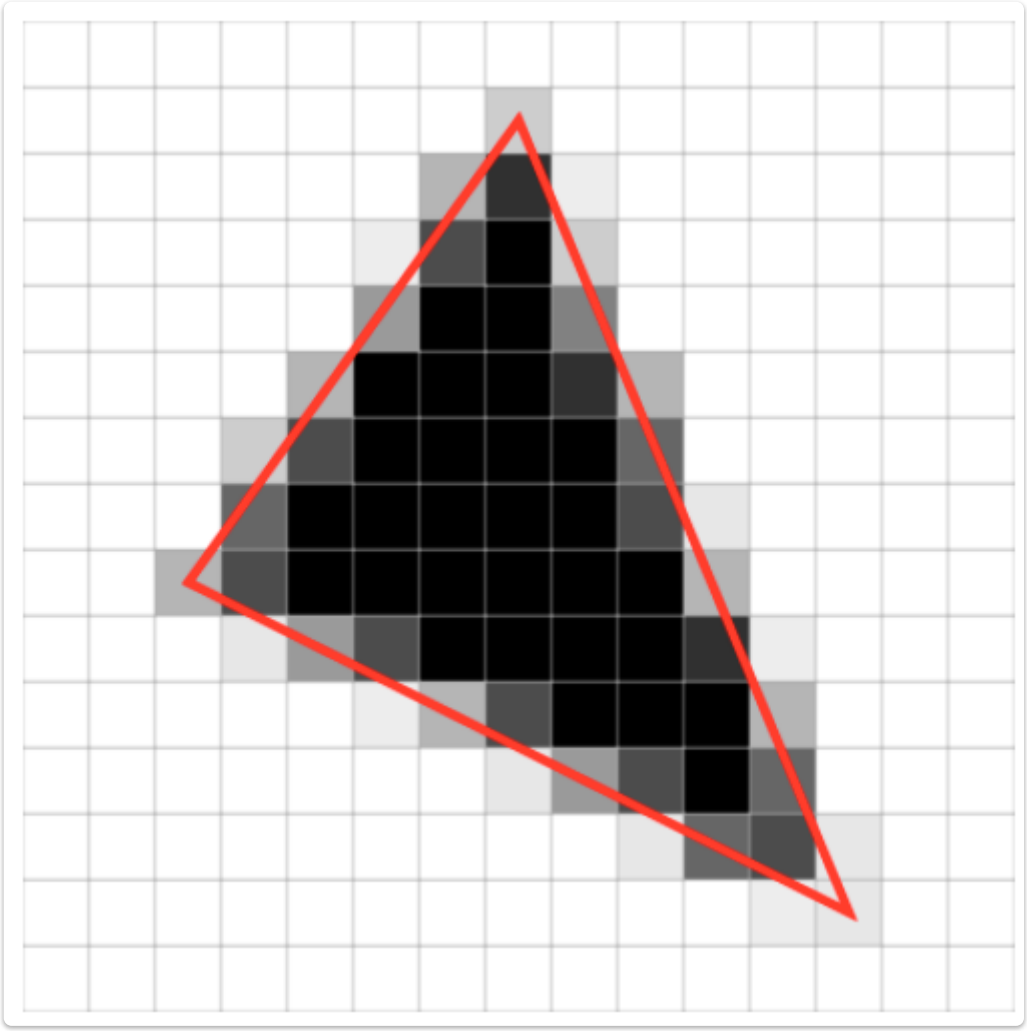
老师 Lingqi Yan大佬 老师个人主页
参考教材：Fundamentals of Computer GraphicsFundamentals of Computer Graphics (4th Edition).pdf
官网：计算机图形学与混合现实研讨会 – GAMES: Graphics And Mixed Environment Seminar
录像：GAMES101-现代计算机图形学入门-闫令琪_哔哩哔哩
课件：课程PPT和视频 – 计算机图形学与混合现实研讨会
论坛：GAMES在线课程（现代计算机图形学入门）讨论区 （发布作业+讨论）

本课程将全面而系统地介绍现代计算机图形学的四大组成部分：

1. Rasterization 光栅化

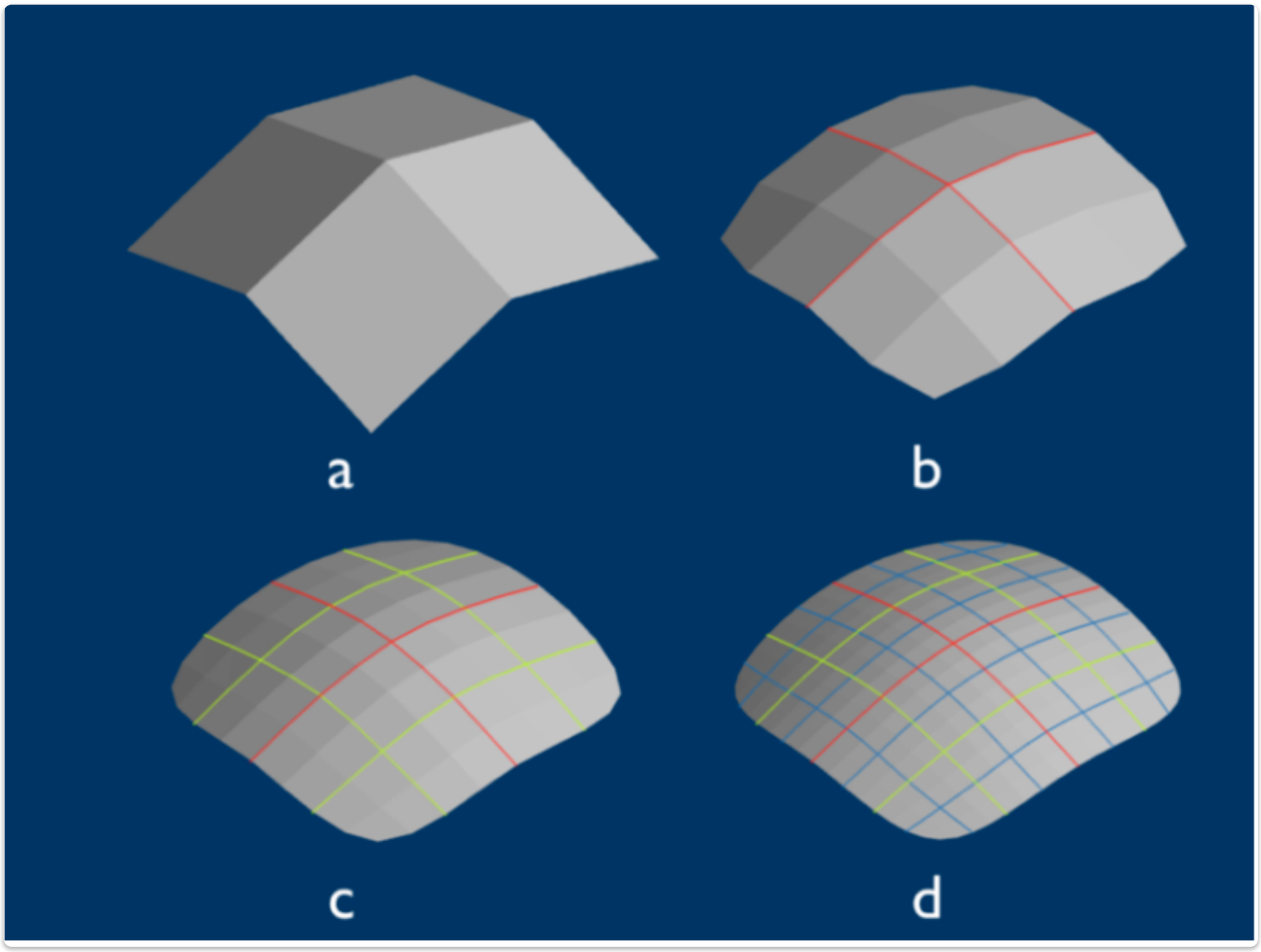
- Project geometry primitives (3D triangles / polygons) onto the screen
- Break projected primitives into fragments (pixels)

- Gold standard in Video Games (Real-time Applications)



2. Curves and Meshes 几何表示

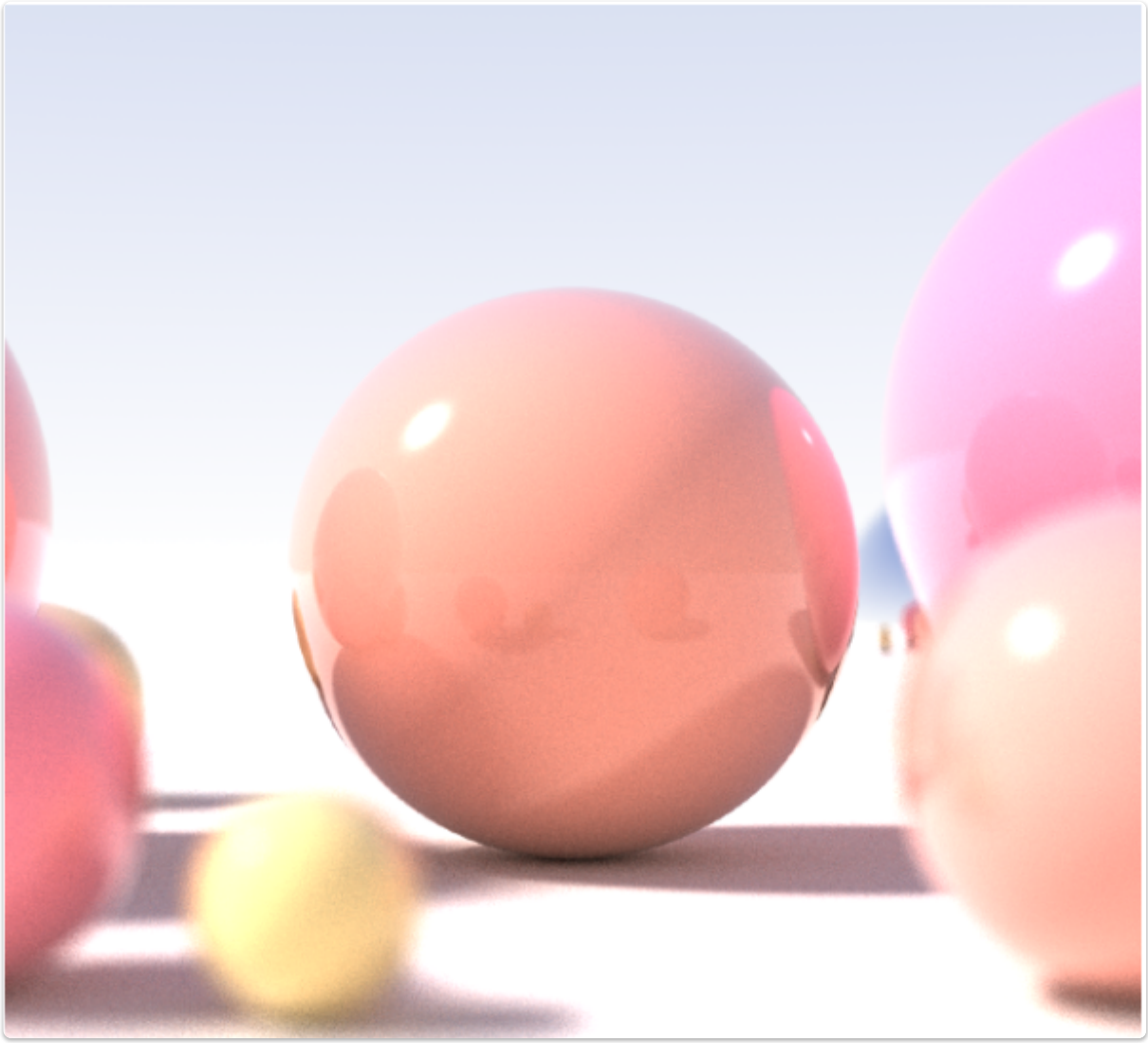
- How to represent geometry in Computer Graphics



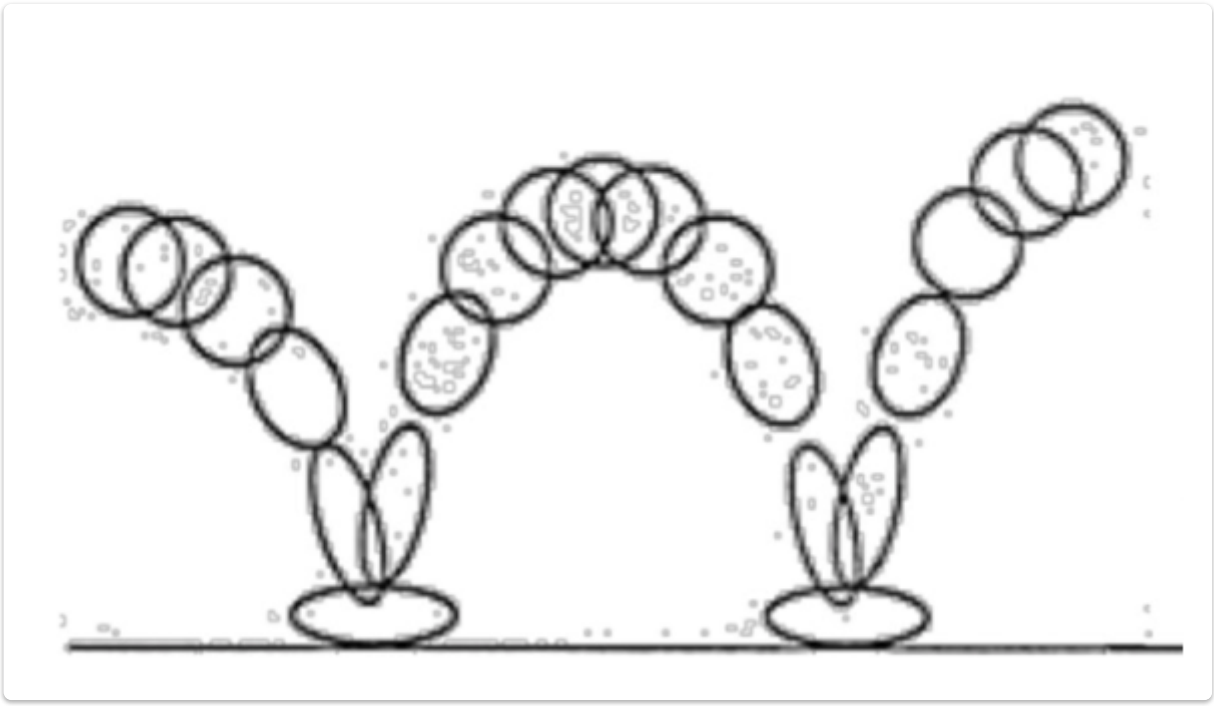
3. Ray Tracing 光线追踪

- Shoot rays from the camera though each pixel
  Calculate intersection and shading
  Continue to bounce the rays till they hit light sources

- Gold standard in Animations / Movies (Offline Applications)



4. Animation / Simulation 动画与模拟



We learn Graphics, not the APIs! 我们应该掌握的是图形学本身，而不是图形学软件的使用

This course won't cover

1. Graphics APIs (OpenGL / DirectX / Vulkan)
2. The syntax of Shaders
3. 3D modeling (Maya / 3DS MAX / Blender)
4. VR/Games development (Unity / Unreal Engine)
5. Computer Vision

Lecture Note

Topic 01 Overview 计算机图形学概述
Topic 02 Linear Algebra Review 线性代数简要复习
Topic 03 Transformation 图像变换