COMP37111 - Advanced Computer Graphics Notes

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1 Course Unit Structure

- 10 credit module. Online exam 75%.
- 30 hour individual lab marked out of 20, due Friday 7 Dec 2018.
  - Design and implement a simulation with particle systems.
  - Model real-time behaviour of a particle system.
  - Give analysis of performance, real-time interaction with varying number of particles.
- The course is split into 4 main sections, the first 2 by Toby Howard:
  1. *Generative Modelling:* Creating 3D models and textures from sets of rules. (Particle Systems, Fractals..)
  2. *Modelling and model acquisition:* Where to get meshes. (Laser scanning, Triangulation..)
- And the last 2 by Steve Pettifer:
  3. *Global illumination:* The rendering equation, ray tracing, luminosity..
  4. *Real-time rendering:* Maximising performance (i.e. frame-rate) using methods like culling.

2 Resources

- Real-Time Rendering book. (Tomas Möller, Eric Haines, Naty Hoffman)
- Real-Time Rendering website.