Numerical Methods for Computer Graphics in Java

Academic Year 2017 – 2018

Università degli Studi di Roma “Tor Vergata”
Presentation of the Course

- **Lecturer**
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- **When**
  - First semester
  - Monday 14:00 – 17:00
  - Wednesday 14:00 – 17:00

- **Where**
  - Room 29A or PC Lab 17
Presentation of the Course

• Topics
  – Part 1: Object-oriented programming with Java
    • Development and reasoning about algorithms/programs
  – Part 2: Basic principles of computer graphics
    • Rendering techniques (rendering pipeline, raytracing, …)

• Related course
  – CAN1: Modellizzazione Geometrica e Simulazione Numerica
    • Computer aided geometric design
      (Bézier and spline curves/surfaces)
Presentation of the Course

- Application fields of the course
  - Software industry
  - Game industry
  - Movie industry
  - Computer aided manufacturing
  - …

  How to develop software?
  + How to create 2D/3D models?
  + How to visualize models?
Presentation of the Course

- Application fields of the course

Lamborghini Huracán

Ratatouille characters © Pixar

Tomb Raider: Lara Croft Character Evolution
Presentation of the Course

- **Application fields of the course**
  - Software industry
  - Game industry
  - Movie industry
  - Computer aided manufacturing
  - ...

- **Goal of course**
  - Understanding of the basic underlying principles

How to develop software?

+How to create 2D/3D models?

+How to visualize 3D models?
Presentation of the Course

- **Application fields of the course**
  - Software industry
  - Game industry
  - Movie industry
  - Computer aided manufacturing
  - ...

- **Examination**
  - Project assignment
  - Written/oral exam

How to develop software?
+How to create 2D/3D models?
+How to visualize 3D models?
Presentation of the Course

- Course material

http://www.mat.uniroma2.it/~speleers/teaching/nmcmjnmcgj/nmcmjnmcgj.html