

# TIEA311

## Tietokonegrafiikan perusteet

kevät 2018

(“Principles of Computer Graphics” – Spring 2018)

### **Copyright and Fair Use Notice:**

The lecture videos of this course are made available for registered students only. Please, do not redistribute them for other purposes. Use of auxiliary copyrighted material (academic papers, industrial standards, web pages, videos, and other materials) as a part of this lecture is intended to happen under academic “fair use” to illustrate key points of the subject matter. The lecturer may be contacted for take-down requests or other copyright concerns (email: [paavo.j.nieminen@jyu.fi](mailto:paavo.j.nieminen@jyu.fi)).

# TIEA311 Tietokonegrafiikan perusteet – kevät 2018 ("Principles of Computer Graphics" – Spring 2018)

Adapted from: *Wojciech Matusik*, and *Frédo Durand*: 6.837 Computer Graphics. Fall 2012. Massachusetts Institute of Technology: MIT OpenCourseWare, <https://ocw.mit.edu/>.

License: Creative Commons BY-NC-SA

Original license terms apply. Re-arrangement and new content copyright 2017-2018 by *Paavo Nieminen* and *Jarno Kansanaho*

Frontpage of the local course version, held during Spring 2018 at the Faculty of Information technology, University of Jyväskylä:

<http://users.jyu.fi/~nieminen/tgp18/>

# TIEA311 - Local plan for today

Today (Wed, Feb 7, 2018) in Mattilanniemi . . .

- ▶ Assignment 0 "aftermath"
- ▶ Go through the last slides of previous time.
- ▶ Assignment 1 – now full speed!
- ▶ Discuss Assignment 1, with C++, if lecture room technology allows

# Assignment 0 aftermath: How to do it “right”

- ▶ The “right way” to implement OBJ reading?
- ▶ In programming, “the **best way**” is somewhat **ill-defined**.
- ▶ All you can (should) do is **better than your earlier code**.
- ▶ **One measure** of a “**good enough way**” is that the code is successfully used in real products
- ▶ But never forget **safety** (as the most important measure), **readability, maintainability, performance** (which only matters in selected places! Almost never “comes first!”). . .
- ▶ That said, two alternatives from real software to read OBJ meshes:
  - ▶ `https://github.com/openscenegraph/OpenSceneGraph/blob/master/src/osgPlugins/obj/obj.cpp`
  - ▶ `https://github.com/dav11/ICG_SSAO/tree/master/source/nv`
- ▶ (The former is properly open source; about the latter I’m not certain - it seems to originate in some Nvidia SDK . . .)

# TIEA311

Now: Discuss Assignment 1, with C++, if lecture room technology allows

Connection between theory, practice, and learning. Concrete C++ coding, if Santa has brought us a working Visual Studio setup in the lecture hall.

[In 2018, Santa was a Good Santa – the action is in the Finnish lecture video. Some "live-coding" and thoughts about how to work and think towards becoming an IT pro. ]