

ESS 524 Class #17

Highlights from last Wednesday – Erich

Today's highlights report next Monday – Shashank

Today

- Project updates
- Homework progress
- Welcome Daniel Shapero
- FireDrake FEM software
- symPy (Python symbolic math)

<https://mybinder.org/v2/gh/danshapero/fire-drake-binder/master>

Reading for next Wednesday (last class)

- Oreskes (1994) *Science*, and comments
- Roache (1997)
- Versteeg and Malalasekara – Chapter 10, Section 10.5, Verification and Validation

Next week

- Monday – Daniel, Class #2

Reading for discussion next Wednesday (See READING tab)

- Oreskes (1994) *Science*, and comments
- Roache (1997)
- Versteeg and Malalasekara – Chapter 10, Section 10.5, *Verification and Validation*

Project oral reports (AGU style)

- Thursday June 11, 2:30

Project written reports (*GRL* or *Geology* style)

- Friday June 13.

Higher-order schemes, colocated grids

Many general codes now use quadratic interpolation in order to evaluate velocities and pressures at the same nodes in unstructured grids, while avoiding the checkerboard patterns that arise with linear schemes.

See these papers under READING tab

- Peric et al. (1988)
- Tinnaluri and Devanuri (2015)

The paper on a structured curvilinear boundary-fitted scheme by

- Price et al. (2007)

is also posted there.