NUCL 655: TWO-PHASE FLOW CFD APPLICATIONS

Instructor: Martin Bertodano, NUC 112D, Ph.: 49169, bertodan@purdue.edu
Office hours: M, W 8:30a - 11:30a.

Textbooks: Gilbert Strang, Computational Science and Engineering, Wellesley Cambridge Press, 2007.

Lopez-de-Bertodano et al., *Two-fluid model stability, simulation and chaos*, Springer, 2017. **http://link.springer.com/book/10.1007/978-3-319-44968-5**

Grading: Homework: 50%
Project: 50%
A+: 95-100, A: 90-94.9, A−: 85-89.9, B: 70-84.9, C: 55-69.9, D: 40-54.9, F: 0-39.9
B, C, D, F are broken in plus-minus ranges of 5 points like A.

Exams: No exams

Homework: Homework assignments are listed in the attached schedule. They MUST be handed in individually in class. Due at beginning of second period after assignment date; accepted one period late with 10% penalty; not accepted otherwise; lateness may be excused for acceptable reasons. *Homework handed outside of class will not be graded*.

Student learning outcomes:

A. Understand basic principles of hyperbolic (wave) and parabolic (diffusion) partial differential equations applied to fluid dynamics.
B. Employ linear stability theory to analyze the Two Fluid Model.
C. Use finite differences to solve partial differential equations of fluid dynamics.
D. Apply principles in A, B and C to simulations with Two Fluid Model Equations.