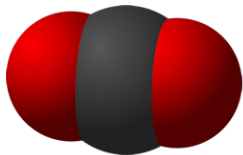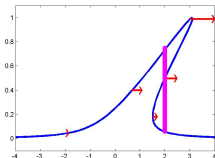# Course Announcement: MTH 621-3
Differential and Integral Equations of Mathematical Physics

http://www.math.oregonstate.edu/~mpesz/teaching/623_S16/

Solution to $u_t + u^*u_x = 0$ at t=3.00

Instructor: Malgorzata Peszyńska.

- PDE models of physical phenomena beyond elementary diffusions and vibrations. Fluids, gas dynamics, acoustics, traffic and crowd modeling, phase transitions, and more.
- Introduction to hyperbolic conservation laws and systems. Weak solutions, shocks and entropy conditions.
- Special methods for PDEs: asymptotic and multiscale analysis, homogenization, similarity methods, variational techniques.
- Integral and integro-differential equations, and applications.

Student preparation: MTH 621-2 or similar. Please contact Instructor to discuss exceptions.

Grading: based on projects assigned for each module.