Course Offering Spring 2020
# CEE 571 Computational Plates & Shells

Prof. Armando Duarte
Faculty: CEE and CSE
11:00am-12:20pm, Tuesday and Thursday

Topics:

- Review of classical and Timoshenko beam models

- Classical/Kirchhoff plate and shell models

- Reissner-Mindlin plates and shells models

- Boundary conditions for P&S models

- Finite Elements for classical plates and shells

- Finite elements for R-M plates and shells

- Convergence and numerical instabilities

- Shear and membrane locking

- Implementation and verification of FE for P&S

- Buckling of plates and shells

- General purpose Abaqus shell element

- NURBS as a basis for isogeometric FE shell analysis

For further information, contact: caduarte@illinois.edu
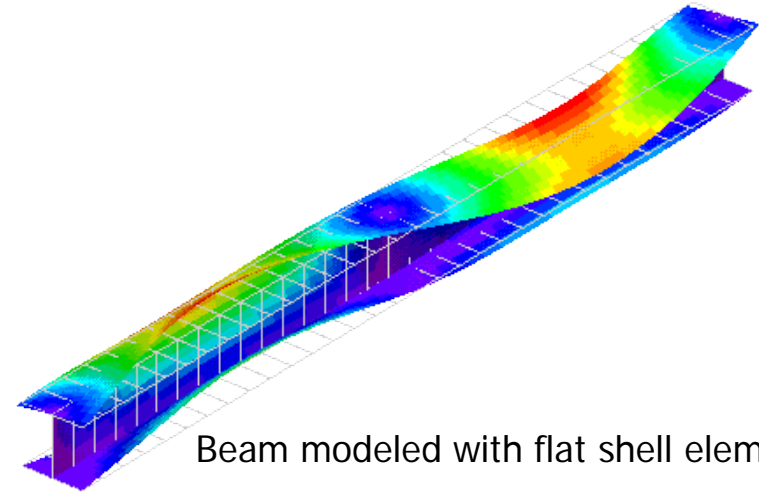
Beam modeled with flat shell elements

Curved Shells