

**ASEN 6367    Advanced Finite Element Methods, Spring '09**

**Homework # 7. Chapters 22–23 of Notes**

Due Thursday April 2, 2009

*Please do not forget to attach this cover sheet to your returned homework*

Three Exercises:

22.1, 22.2 (added to end of Chapter 20) Easy, a minute each.

23.2 (uses Section 23.7, long). Can be done in Matlab since the data is numeric. To save programming time the 6 DPT cases (3 RBMs and 3 constant strain states) could be done as 6 right hand sides. Likewise for the 3 constant stress cases in the FPT. For the latter apply 3 support BCs to remove the 3 rigid body modes, for example  $u_{x5} = u_{y5} = 0$  and  $u_{x8} = 0$ . But careful: no more than three!

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Grading weights: worth in pts is annotated at the beginning of each Exercise.

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Notes:

Pls select your Term Project and propose it to instructor by Tuesday after Spring Break. Information needed: title and a short (one paragraph) description, group member names & emails. Group projects are encouraged. Can be sent by email to [carlos.felippa@colorado.edu](mailto:carlos.felippa@colorado.edu). Rules and timelines posted on course web site: scroll to end of mome page to the 2009 Projects link.