ME 106  ENGINEERING IN ANTIQUITY – Fall 2009

FINAL PROJECTS Due Tuesday, December 15

An important part of this course is the research paper that each student must submit. The primary goal is for you to dig deeper in and learn more about an ancient engineering project that may interest you. Another goal is to pull together some of the material that we have learned in class, and use this as background for a study of your own.

Your paper will focus on one published technical paper that can be easily retrieved from the journal literature. Your job is to study this paper, and then summarize it in your own written report. The report must include.

- The objective(s) of the paper,
- the evidence described in the paper,
- the argument presented by the author(s),
- provide critical comments about the limitations of the paper and
- indicate ways in which you would extend this work if you had the resources to do so.

The projects marked with ***** are more intensive on the research side because they require the application of substantial engineering analysis on your part, but involve less reading.

Reports must be typewritten with double spacing and three to five pages long. Figures and tables should be put at the end in a separate appendix and do not count towards the length of the paper.

Deadlines:
Monday, 7 December: select paper for the project and email title to Prof. Perucchio,
Tuesday, 15 December: hand in (do not email) your report by noon (you can bring it to my office or leave it with the ME secretary in Hopeman).

Here is a list of available papers and projects.

1. Lynne Lancaster, Building Trajan’s column, Amer. J. of Archaeology 103 (1999) 419-439. [JSTOR]


5. Andrew Wilson, Machines, power and the ancient economy, J. Roman Studies 92 (2002) 1-32. [JSTOR]

7. A. W. Parsons, A Roman water-mill in the Athenian agora, Hesperia 5 (1936) 70-90. [JSTOR]


17. W. B. Dinsmoor, Structural iron in Greek architecture, Amer. J. Archaeology 26 (1922) 148-158. [JSTOR]


27. Gorham P. Stevens, Concerning the curvature of the steps of the Parthenon, Amer. J. Archaeology 38 (1934) 533-542. [JSTOR]


31. ***** Structural analysis of the Cimone bridge designed by Palladio (The four books of Architecture, Third Book, Chap. VII).


33. ***** Structural design of timber falsework for the construction of a Roman arch (C. O’Connor, Roman Bridges, 1993, p. 174).