JHU Department of Civil Engineering
560/500.141:
Perspectives on the Evolution of Structures
Spring 2005

Course website:
http://www.ce.jhu.edu/perspectives
user: perspectives
pass: structures

Learning Objectives:
For the structures discussed in class, you should be able to:

• identify from an image a structure’s designer and location
• explain how form relates to forces in the structure
• explain the social, symbolic, and scientific significance of the structure (GWB, Eiffel Tower, Hancock, and Salginatobel at least)
• explain qualitatively how the loads are transferred by the structural system to the ground
• perform simple calculations to determine the forces in the main structural members

For structures which you encounter in the world around you, you should be able to:

• explain qualitatively the means by which loads are transferred to the ground
• evaluate the qualifications of the structure as a work of structural art
• research the social, symbolic and scientific aspects of the structure and express your findings clearly in both written, graphical, and spoken form
Instructor:
Sanjay Arwade
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Teaching Assistant - Sections:
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Teaching Assistant - Calculation Homework:
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Office Hours:
Arwade: M 4-5 and by appointment
Moen: TBA
Acton: By appointment
Seif: TBA

Lectures:
MT 3:00pm - 3:50pm Hodson 311

Sections:
W 3:00pm - 3:50pm Hodson 311 and Hodson 313

Text:
D. P. Billington. The Tower and the Bridge (Many inexpensive copies of this book are available online at bn.com, amazon.com and bookfinder.com, one copy is also on reserve at the library.)

Other reading (MSE reserve):
Gordon. Structures: or Why Things Don’t Fall Down. Da Capo Press
Billington. The art of Structural Design: A Swiss Legacy. Yale University Press
Billington. Robert Maillart and the Art of Reinforced Concrete. MIT Press
Billington Robert Maillart’s Bridges. Princeton University Press
Course statement on ethics:
The mission of this university, and the value of your education depend upon academic integrity and ethical behavior. You must behave ethically in all your participation in this class. A non-exhaustive list of examples of unethical behavior is: plagiarism, use of unauthorized notes during an exam, receipt of external aid during an exam, uncited use of sources from the internet or elsewhere. You are encouraged to work together on homework assignments and the final project, but the work you submit must be your own. If you have questions about the propriety of certain actions, ask the professor. If it feels wrong it probably is. If you observe breaches of academic integrity, report them immediately to the professor or TA; such report may be made anonymously by leaving a note at the department office.

Grading:
- Writing/Homework: 25%
- Midterm exam: 30%
- Project bibliography and outline: 5%
- Project presentation: 10%
- Project report: 30%