New Bridge Forms: Maillart and Menn

The hollow box arch after Salginatobel
Early Menn bridges and the influence of Maillart
Long span arches of Christian Menn
  prestressing and deck-stiffening
Menn and the long span, prestressed, hollow box girder
The Ganter Bridge, a new form
Menn’s cable-stayed bridges
New Tavanasa (Not Maillart)
Valtschielbach (Maillart)
Vessy 1936
Ansicht des Eisenbahnbrücken-Projektes in Bern. / Vue du projet de pont-rail à Berne. / View of the railway-bridge project in Berne.
Vessy 1936
Maillart - Salginatobel
Christian Menn
1927 -
(atop Valtschielbach!)
Reichenau 1964 - 98 meters
care to criticize?
Felsenau 1970
Ganter 1980
Menn’s continuing evolution in cable-stayed forms 1980’s-2000’s
Sunniberg - photo from Structurae.de J. Mathis
La ingeniería es siempre creativa, porque si no lo es, no es ingeniería

-Leonardo Fernández Troyano
Final Project

- To be done in pairs, self-selected
- Important dates:
  - Tuesday April 7th: Groups finalized
  - Thursday April 9th: Peer editing of thesis/outline
  - Tuesday April 14th: Bibliography/outline/search results due
  - April 28/30: Project conferences
  - Week 14/15: Project presentations
  - Last day of classes: Paper due.
Discussions
Organize around specific topics and use images.

Too much focus on the engineer vs. the architect.
More discussion!

Calculations
Mixed reviews on whether more time is needed.
Not always clear what/why we are calculating.
Questions sometimes not worded clearly (5).
It seems that the formulas are just given right at the end of class with little or no explanation (3).
Too much explanation, making the HW into busywork.

General
Prof. Arwade’s personal opinion seems too strong and blocks open discussion.
Aesthetics are judged from a one-sided perspective. Anything other would be incorrect.

Why are we not being told the S’s and E’s anymore?

Provide a glossary of bridge and building vocabulary. More diagrams to explain the forces.

Should go over concepts behind calculation assignments in class, before we see the pictures.

Would like to see fewer structures and spend more time with each one.

Not clear why the lectures are presented in the order they are.

Lectures very fast! Hard to take notes.

It would be nice to make more use of calculations during MT lecture.
QUARTER SPAN
DANUBE BRIDGE
Special Lecture

Four Towers: The Story of the Redevelopment of Times Square

Eli Gottlieb, Associate, Thornton-Tomasetti Engineers

Tuesday, 4:00-4:50, Maryland 110