

Tuesday February 24, 2009



Transalpine Tunnels in Switzerland

Professor Herbert H. Einstein
Massachusetts Institute of Technology

Radisson Hotel, 200 Stuart Street, Boston, MA
5:30 PM Social/Registration; 6:30 PM Dinner; 7:30 PM Presentation

\$55 Members, \$65 Non-Members
\$40 Public Sector Members, \$55 Public Sector Non-Members
\$25 Student Members and Senior Members (65+)

Three major transalpine rail-tunnels with lengths of 57, 35 and 15 kilometers below overburdens of more than 2000 meters have been and are being built in Switzerland. The history of transalpine transportation and the political decisions leading to the construction of these tunnels will be reviewed first. The talk will then concentrate on the longest, the Gotthard tunnel. After describing the general geologic conditions, the design, and construction involving TBM and Drill-and-Blast excavation will be discussed. The geology ranges from hard and brittle rock to soil-like conditions requiring a variety of design and construction procedures including highly deformable supports. A number of related issues such as the effect of water inflow into the tunnel on settlements of arch dams and the reuse of muck will also be addressed. Cost and time estimates will be discussed in comparison with the actual values, which are strongly affected by factors other than geology. Finally, selected comments will be made on the other two tunnels; the 35-km-long Lötschberg tunnel that has been in operation since December 2007 and the 15-km-long Monte Ceneri tunnel that has started construction.

Registration Deadline: Thursday, February 19, 2009

Information/Registration: Register to attend this meeting and pay by credit card online at www.bsces.org. Search for this program under Events. Click on Events then BSCES Events; locate and click on the program name and on the next page click on Learn More. You can also register by emailing your name, membership status, address and phone to Ruby.Aguilar@jacobs.com or calling 617/532-4383. Cancellations received after the registration deadline and no-shows will be billed.