



Friedman Family EERI Visiting Professional

John D. Hooper, SE
Principal and Director of Earthquake Engineering
Magnusson Klemencic Associates, Seattle, WA

On December 6 and 7, 2007, the University of Minnesota EERI student chapter hosted John D. Hooper as part of the Friedman Family Visiting Professional Program. The visit was very productive and beneficial to all of the students and faculty who participated.

John arrived in the early afternoon on Thursday, December 6 and was picked up at the Minneapolis-St. Paul airport by EERI Vice President Keith Palmer and member Ozer Dereli. He was taken to his hotel to check in and then John kindly bought Keith and Ozer lunch, discussed their research activities as graduate students, and John shared interesting stories about life in the 'real' engineering world.

John then sat down with Professor Art Schultz, an expert in the seismic design of masonry structures. This was followed by a meeting with Professor Taichiro Okazaki, an expert in the seismic design of steel structures. John then toured the Multiaxial Subassembly Testing (MAST) facility, one of the large-scale NEES labs, with Professor Cathy French.

John was kind enough to give two presentations during his stay. The first presentation, which occurred Thursday evening, was entitled "Seismic Design of Tall buildings and Other Structures with Unique Architecture." The main thrust of this talk is fully described in the attached flyer. The very interesting and colorful presentation by John was well attended by students and faculty.

Following the first presentation, John enjoyed dinner with eight students and Professor Okazaki. John provided his thoughts on the practice of structural engineering and life in general, and the students and faculty had a very enjoyable time.

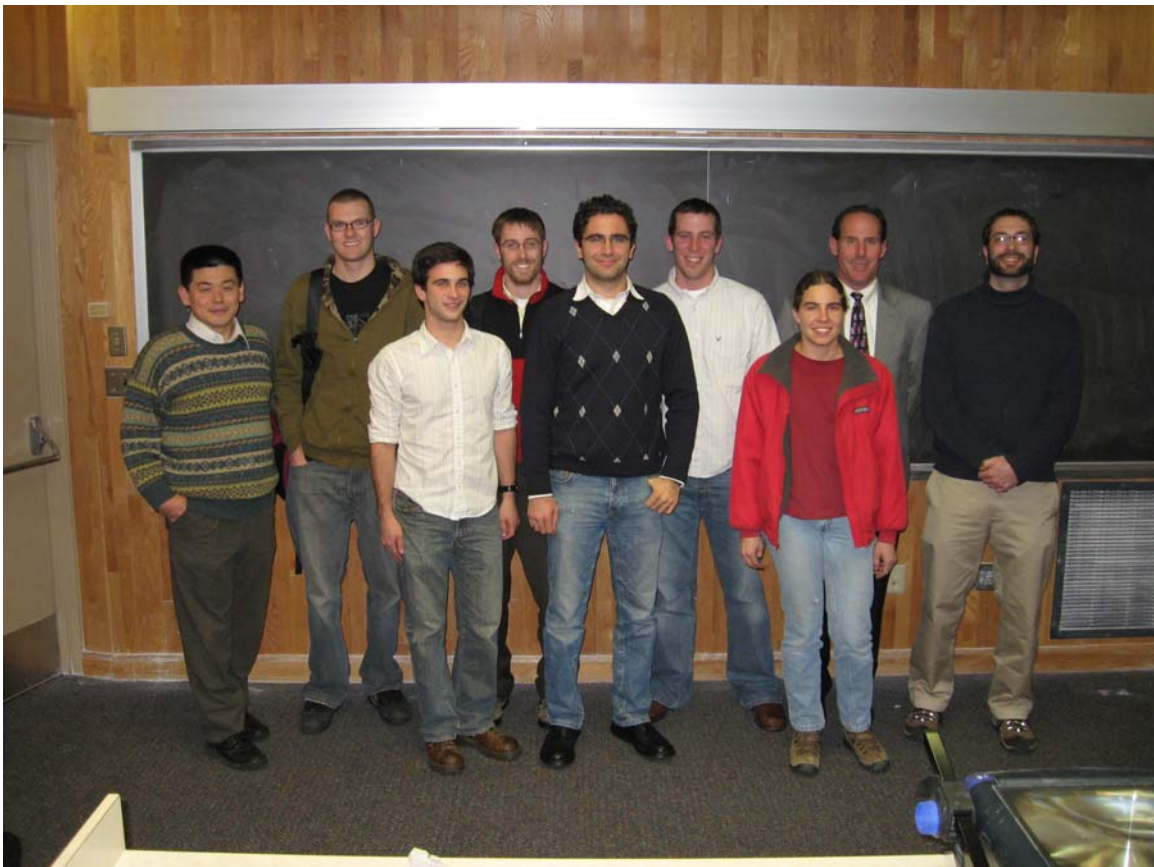
On Friday morning, John gave his second presentation during the weekly seminar for structures graduate students. There were two parts to this seminar. The first part was entitled "Practical Design and Construction of SPSW," and the second was "The Design of the New University of Minnesota TCF Band Stadium." This presentation was also very interesting and well attended by students and faculty.

After his presentation and a short gathering with students, John sat down with Emeritus Professor Ted Galambos, who John knew well from his committee service. John then met with Professor Carol Shield, an expert in FRP reinforcement for concrete.

At lunchtime, an informal roundtable discussion with students and faculty was held. John discussed a number of interesting projects that required experimental verification of the structural assemblages to satisfy the peer reviewers of these projects. These were exciting and very educational discussions.

John was then given a tour of the structures lab in the Civil Engineering building prior to being taken back to the airport by Keith and Ozer.

The EERI chapter of the University of Minnesota, faculty, and students would like to thank the Friedman family for supporting the Visiting Professional Program. The students and faculty learned a great deal about earthquake engineering, real world structural design, and about the excitement of being in such a dynamic and fascinating field.



Faculty and students with John after first presentation



**Earthquake Engineering
Research Institute**



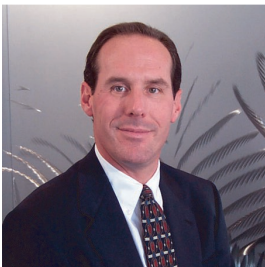
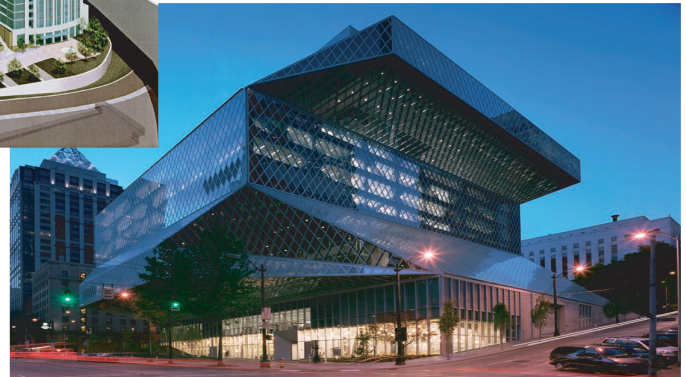
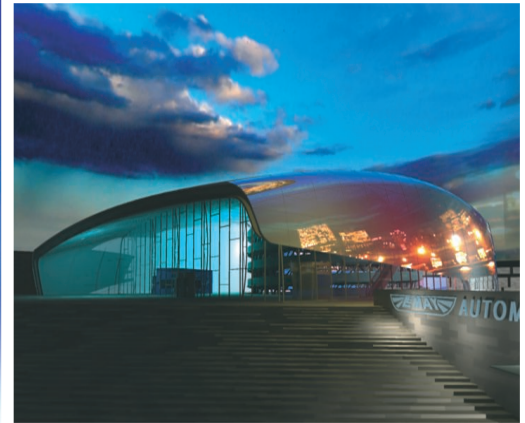
University of Minnesota Student Chapter
presents



Seismic Design of Tall buildings and Other Structures with Unique Architecture

The seismic design of tall buildings and other structures with unique architecture presents unique code and design challenges. Many of these tall buildings and structures challenge the “basic” seismic force-resisting systems that are allowed by building codes requiring the implementation of an “alternative means and methods” approach. Typically, this approach adopts a performance-based seismic design method to show that the buildings seismic performance will be, as a minimum, equivalent to a prescriptive, code-designed building. The presentation

will outline some of the unique approaches that have been implemented on a variety of building types and will outline a generalized performance-based seismic design approach that has been utilized on 15 high-rise designs in high seismic regions.



John D. Hooper is a Principal and Director of Earthquake Engineering with Magnusson Klemencic Associates in Seattle, Washington. He received his Bachelors Degree from Seattle University (1981) and his Masters Degree from the University of California at Berkeley (1984). A registered Structural Engineer in Washington, John has 26 years of experience in the seismic design of building structures with an emphasis on essential facility, healthcare and performance-based design projects.

John has been involved in building code and standard development for the past 20 years. He served as chair of the International Code Council's Structural Code Development Committee for the development of the 2006 International Building Code, which was responsible for all the structural and seismic aspects of this upcoming code. Currently, John is TS 2 chair for the Building Seismic Safety Council's 2008 Provisions Update Cycle and chair for ASCE 7 Seismic Sub-committee for the upcoming 2010 cycle. In addition, John is a member to AISC's Seismic Subcommittee, TC-9.

**Thursday, December 6
5:30pm in Civil Engineering 205**



**Earthquake Engineering
Research Institute**



**University of Minnesota
Student Chapter**

**Friday December 7th
12:00pm in 205 Civil Engineering Building**

Practical Design and Construction of SPSW

Steel plate shear walls (SPSW) have been used, to a limited extent, as the primary seismic force-resisting system in buildings for more than three decades. Their recent good performance in major earthquakes, their robust performance in the laboratory, and their recent inclusion in codes and standards make SPSW a good choice for a variety of building applications. Selecting SPSW for the primary seismic force-resisting system requires a thorough understanding of the advantages and disadvantages of the SPSW system relative to other competitive systems as well as configuration issues, analytical modeling techniques, and construction considerations associated with the system. This presentation summarizes these issues and presents a case-study in the use of SPSW using the new U.S. Federal Courthouse located in Seattle



Design of the New University of Minnesota TCF Bank Stadium



TCF Bank Stadium is a new 50,000 seat stadium for the University of Minnesota Golden Gophers. The stadium has open air seating with covered concourses, luxury suites, and club seating. The design takes into special consideration fan induced vibrations and thermal expansion in addition to the prevalent wind, ice, and snow loads found in the harsh Minnesota cold-weather environment. Currently under construction, the stadium is due to be complete Fall, 2009. This presentation will describe the overall project information and will highlight some of the challenging structural design issues.

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