

STEEL NEWS & EVENTS

Steel Industry Contributions Earn Awards

The American Institute of Steel Construction, Inc. (AISC) presented six lifetime and special achievement awards at the North American Steel Construction Conference on April 24, 2002 in Seattle, WA.

The *Lifetime Achievement Award* honors living individuals who have "made a difference" in AISC's and the structural steel industry's success. The award provides special recognition to individuals who have provided outstanding service over a sustained period of years to AISC and the structural steel design/construction/academic community. The following includes information on the award winners and their accomplishments.

- John M. Kulicki, Modjeski & Masters, Inc., received the *Lifetime Achievement Award* in recognition of his status as one of the premier bridge designers of his generation, as well as for his strong support of steel and his involvement with NSBA (National Steel Bridge Alliance) activities. Kulicki has designed such notable structures as the Blue Water Bridge between Port Huron and Sarnia (Canada).
- Lawrence G. Griffis, Walter P. Moore & Associates, received the *Lifetime Achievement Award* for his recognition as one of the foremost structural engineers of his generation and for his innovative use of steel on a wide range of projects, ranging from major office buildings to stadiums. He previously received the T. R. Higgins Award for his innovative work on composite design.



Lou Gurthet, president of AISC, presents Donald Sherman with his *Lifetime Achievement Award*.



Randolph Jefferson and James Glymph receive their *Special Achievement Awards* from AISC president Lou Gurthet.

- Donald Sherman, University of Wisconsin-Milwaukee, received the *Lifetime Achievement Award* for his long-time participation in AISC activities, including the Partners in Education program, Education Committee, and as a lecturer in several AISC continuing education programs and conferences. Sherman also conducted the breakthrough work on HSS connections that directly led to a marked increase in the use of hollow structural sections.

The *Special Achievement Award* provides special recognition to individuals who demonstrated notable singular or multiple achievements in structural steel design, construction, research or education. This award honors living individuals who have made a positive and substantial impact on the structural steel design and construction industry. The following includes the award winners and their accomplishments.

- Randolph Jefferson and James Glymph, Frank O. Gehry & Associates, received the *Special Achievement Award* for their work in implementing their

firm's innovative steel designs and utilizing new technology to advance the use of steel design.

- Kim Roddis, University of Kansas, received the *Special Achievement Award* for her breakthrough development of an internet-based teaching aid for undergraduate steel design has the potential to revolutionize the teaching of steel. The web-enhanced teaching aid consists of a case study of the design of a fictitious three-story steel braced-frame office building, which provides instructors with a critical tool to expose students to the design of steel building elements in a realistic building context. The tool bridges the gap between typical book text element design examples and the design situation students will encounter in the real world.
- Charles W. Roeder, University of Washington, received the *Special Achievement Award* for his work on Eccentrically Braced Frames, which has helped maintain steel's status as the material of choice for seismic design. He also was one of the key researchers in the SAC Research Project.

For more information about the *Lifetime Achievement Award* or the *Special Achievement Award*, please visit the AISC website at

www.aisc.org/awards.html

Steel Fanatics Invade Seattle

Looking to advance their knowledge and skills, more than 2,200 attendees converged on the harbor town of Seattle for the 2002 North American Steel Construction Conference, held April 24-27 this year.

Jon Magnusson of Seattle-based Skilling Ward Magnusson Barkshire Inc. delivered the conference's opening plenary address, speaking about his role as the present chairman and C.E.O. of the firm that was responsible for the design of the World Trade Center some 30 years ago. Compelled by the media to speak in the hours shortly after the attack on the World Trade Center, Magnusson was among the first to respond publicly with a credible engineering judgment as to why the towers collapsed.

Perhaps the most startling portion of Magnusson's presentation was a pictorial comparison of the size of aircraft of the present and the past, and the fuel energy load that they contained. The magnitude and impact of the B-25 bomber, which struck the Empire State Building, was dwarfed when compared side-by-side with the Boeing 767 that impacted the World Trade Center. The next generation of planes—the Airbus A380—overshadows the size of the 767. Such a trend poignantly demonstrates that design criteria of buildings cannot be made to resist such threats and that efforts should be focused on the control of these hazards, rather than the design of buildings to withstand them.

Magnusson also gave the Thursday plenary address and focused on innovative structures in Seattle, while Charles Thornton spoke on Wednesday on the ACE Mentoring Program.

Other noteworthy sessions included the unveiling of a new AISC Seminar entitled "Practical Steel Design," developed by Louis Geschwind-

ner, professor of architectural engineering at Penn State University. The nine-hour course focused on structural systems for buildings up to 20 stories in low-seismic applications (R less than three) and high seismic applications (R greater than three). The conference also featured a seven-hour program on connection design, as well as more than 40 technical sessions aimed at practicing engineers, fabricators, detailers, and erectors. Among these technical sessions were presentations on perimeter details, fire protection requirements, parking design, and low floor-to-floor height solutions.

The NASCC also offered a number of highly attended management sessions, including one on how to avoid construction litigation and another on contract terms and conditions.

W. Samuel Easterling, associate professor of civil engineering at Virginia Tech, was awarded the T. R. Higgins Award for his paper, "Developments in Long-Span Composite Slabs." Easterling's research represents a significant contribution to the practical application of composite systems for creating versatile and cost effective spaces.

The near-record attendance at the NASCC conference is indicative of the strength of the industry that it represents. Next year's conference is scheduled for April 2-5 in Baltimore, and an advance program should be available in September.

—Christopher M. Hewitt

New Canam Joist Plants Planned for U.S.

The Canam Manac Group of Saint-Georges de Beauce has announced its intention to build three new Canam steel joist and deck plants in the United States within the next two years. This project will require investments totaling approximately \$60,000,000, and will add 200,000 tons of production capacity to current 825,000 ton capacity of the 16 existing plants.

The President and CEO of the Canam Manac Group, Marcel Dutil, explained that the first two plants will begin in 2002 in southern California and in the Midwest and will begin production in the fall of 2003.

The California plant will have a production capacity of 65,000 tons of steel joists and 35,000 tons of 1½", 2" and 3" steel deck while the Midwest plant will have a production capacity of 35,000 tons of steel joists. The third plant will also have a production capacity of 35,000 tons and will be built in Texas and will open in the fall of 2004.

These three new plant will generate additional sales of CAN\$200 million (approx. US\$128 million) for The Canam Manac Group when they reach their maximum production potential. The Canam division is the largest steel joist fabricator in Canada and the second largest in North America.



Above: AISC's Charlie Carter and AISC alumnus Bob Disque (of Gibble Norden Champion Brown) model their new *Steel Fanatic* hats.

Left: The exhibit floor awaits the arrival of the 2,206 conference and trade-show attendees.

In the News...



The School of Civil Engineering at Andrés Bello Catholic University in Venezuela has installed the first steel teaching sculpture in any Venezuelan university.

Study Identifies Project "Risk Drivers" for Engineers and Architects

A new study conducted by DPIC companies confirms that structural engineers remain the high-risk discipline when it comes to professional liability claims. And, no surprise, condominiums continue to top the charts as the riskiest type of construction project. What may be surprising, though, are the prevalence of non-technical factors that often lead to these claims.

DPIC's Risk DriversSM study analyzes 8687 claim files from 1996 to 2000, measuring relative risk of design work by design discipline, project type, and other factors.

DPIC's Risk Drivers study revealed that structural engineers are not only more likely than other design professionals to experience claims, but the claims are typically more costly. Structural engineers accounted for 11.3% of claims and 16.1% of claims dollars among DPIC insureds studied. Yet, structural engineers accounted for only 6.7% of the fees generated by this group of DPIC policyholders.

For purposes of the study, an "average" risk is one where percent of fee dollars earned by the design discipline (a measure of the total work volume that creates risk exposure) and percent of claims dollars paid out by DPIC on behalf of that discipline are roughly equal. When percent of fee dollars is higher than percent of claims dollar, the discipline is considered a lower-than-average risk. When percent of claims dollars is higher than percent of fee dollar, then it is considered higher-than-average risk.

Residential condominiums remain a professional liability nightmare, the DPIC study confirmed. While DPIC insured generated only 0.7% of their fees from condo work, these projects accounted for 5.4% of all DPIC claims and ate up 8.1% of claims dollars paid out by DPIC.

By studying 17,300 closed claim and loss prevention files representing \$665 million in claims payments from 1989-2000, DPIC identified the top four non-

technical factors that contribute to claims. They are:

- Communications issues (a contributing factor in 27% of claims files)
- Project team capability issues (a contributing factor in 24% of claims files)
- Client selection (a contributing factor in 16% of claims files)
- Negotiation and contract issues

The significance of these findings is that design firms can significantly reduce the chances of claims by improving their practice management skills, according to Steve Mauck, DPIC's Chief Claims Officer. "These non-technical issues are at the heart of most disputes and set the scene for errors, omissions and claims. They also represent a controllable risk factor."

More detailed information from DPIC's Risk Drivers Study is available by contacting Tom Owens at 800.227.8533, ext. 217 or by emailing tom_owens@rsausa.com.

Staggered Truss Seminars Slated

AISC Marketing, LLC, is pleased to announce a series of educational and informative breakfast seminars on the innovative staggered truss steel framing system. This low floor-to-floor height, multi-story residential system is beginning to catch on due to its advantages of more column-free space, lower foundation costs, faster erection and the use of dry, all-weather, lightweight precast plank, which provides semi-finished floors and ceilings. Recent examples of successfully completed staggered truss buildings include the Embassy Suites in New York City, the Mystic Marriott in Grotton, CT, the Clayton Park Apartments in White Plains, NY and the Aladdin Hotel & Casino in Las Vegas.

The breakfast seminar is designed for the structural engineer and will present the new Staggered Truss Design Guide and the new ETABS Software with the Staggered Truss Model.

Now, designing with staggered truss is easier than ever.

The program will begin at 7:30AM (with breakfast) and conclude at 9:30AM. The dates and locations are as follows:

- June 26, Atlanta
- Sept. 18, Washington, DC
- Sept. 25, Miami
- Oct. 16, Dallas
- Nov. 13, Chicago

For more information and registration, please contact Becky LeDonne at 312.423.4651 or Steve Angell at 312.670.5420, or email angell@aisc.org.

Bridge Design Seminars

The National Bridge Research Organization (NaBRO), in conjunction with the National Steel Bridge Alliance (NSBA) and the North Carolina and New York departments of transportation, has developed a 1.5-day seminar covering the design of steel bridges using the AASHTO LRFD Bridge Design Specifications. Sessions will con-

sider seismic design issues and include a session on cost-effective bridge design details.

The course will include short design examples and exercises covering the application of AASHTO LRFD code provisions, as well as a brief overview of the code background.

Schedule

Raleigh, NC June 17-18, 2002
Wake County Commons Building

Rochester, NY July 16-16, 2002
Crowne Plaza Hotel

Fees

NC DOT staff \$125; non-DOT \$250
NY DOT staff \$175; non-DOT \$275

Registration includes a lunch, class notebook, and certificate of attendance. For more information or to register, fax your request for information to NaBRO at 402.472.6658. Payment must be by check or direct billing. Credit card registrations cannot be accepted at this time. For availability of overnight accommodations at the Crowne Plaza, Rochester, call 716.546.3450.

Excellence in Structural Engineering Competition

The National Council of Structural Engineers Associations (NCSEA) announces the Call for Entries for the 2002 NCSEA Excellence in Structural Engineering Awards Program. The purpose of the program is to recognize creative achievement and innovation in structural engineering.

Entries must be submitted by a licensed Professional Engineer (P.E.) or Structural Engineer (S.E.) whose practice or activity is primarily in the field of structural engineering. Deadline for entries is 4:00 p.m. CDT on Monday, July 15, 2002.

Murray Elected to National Academy of Engineering

Virginia Tech engineering professor Thomas M. Murray has been elected to the National Academy of Engineering (NAE), one of the highest honors that can be accorded an engineer. Academy membership recognizes those who have made important contributions to engineering theory and practice and have demonstrated unusual accomplishment in the pioneering of new and developing fields of technology. Murray was elected for his leadership in developing criteria for floor serviceability and his major contributions to structural steel design engineering.

Among Murray's numerous accomplishments is the development of techniques for building lightweight, affordable floor systems that reduce vibrations in large composite steel structures, such as airports and shopping malls. He is co-author of AISC's Design Guide No. 11—Floor Vibrations Due to Human Activity, used extensively by structural engineers in the U.S. and Canada.

Murray, the Montague-Betts Professor of Structural Steel Design in the Via Department of Civil and Environmental Engineering, came to Virginia Tech in 1987 after 17 years on the faculty of the University of Oklahoma, the last of which he spent as a distinguished visiting professor at the U.S. Air Force Academy. He received his bachelor's

degree from Iowa State University, his master's from Lehigh University and his doctorate from the University of Kansas. Active in numerous professional organizations, he is a Fellow of the American Society of Civil Engineers. The American Institute of Steel Construction (AISC) honored Murray with a special citation for contributions to the art of steel construction and with the T. R. Higgins Lectureship Award. He also has received excellence in teaching awards from both Oklahoma and Virginia.

Projects must have been completed after January 1, 1999, or must be sufficiently complete such that they clearly show the basic design of the structural system. Within the context of this awards competition, "design" refers to the overall concept of any structure type, or the detail of a single element that performs a key function within the completed structure. New projects, renovations, rehabilitation, structural upgrades and adaptive reuse of buildings, other structures, and bridges are eligible.

Awards will be presented in two project categories: bridge and transportation structures, and buildings and all other structure types.

Murray joins several other current and former Committee members previously elected to the academy in the Civil Engineering membership category: Lynn S. Beedle, Bruce R. Ellingwood, Steven J. Fenves, John W. Fisher, Theodore V. Galambos, William J. LeMessurier, William McGuire, Ivan M. Viest, and Joseph A. Yura.

The NAE, an independent, non-profit institution, was established in 1964 under a congressional charter to provide national leadership and guidance on the application of engineering resources to vital issues.



Thomas M. Murray

More information about entering the competition can be found on the NCSEA web site, www.ncsea.com, or by contacting Donna Childs at NCSEA at 312.372.4198.

Practical Steel Design: 2-20 Stories

AISC's Continuing Education Department, in conjunction with Louis F. Geschwindner, Ph.D. P.E., professor of architectural engineering at Penn State University, has developed this comprehensive new seminar to teach the fundamentals of LRFD steel design in real-world buildings.

This practical steel design presentation will cover the decisions needed in steel system selection and design when the seismic response modification factor R is taken as 3 or less, i.e. when gravity, wind and low-seismic applications govern. This seminar addresses floor-system (diaphragm) selection and design, including considerations for controlling deflections and vibrations, as well as the selection of economical bay sizes. Systems to be discussed include concentrically braced frames, moment frames with fully restrained moment connections, partially restrained moment connections as well as staggered truss framing systems. Analysis, load distribution, and system design will be presented.

Lectures will be presented by highly-qualified local design professionals. Attendees will receive a copy of the new AISC 3rd ed. *LRFD Manual of Steel Construction* at the seminar, as well as a complimentary one-year AISC professional membership.

Dates and Locations

June 19	Louisville, KY <i>Hyatt Regency</i>
June 20	Indianapolis, IN <i>Hyatt Regency</i>

The seminar costs \$225 for AISC members and \$275 for non-members. Discounts are available for firms registering three or more people. To download a registration form, visit www.aisc.org/seminars.html, or email Steve Ashton (ashton@aisc.org) for more information.