

news & events

AWARDS

Donald W. White Wins 2009 T.R. Higgins Award

Donald W. White, Ph.D., a professor at the School of Civil and Environmental Engineering at the Georgia Institute of Technology, is the recipient of AISC's 2009 T.R. Higgins Lectureship Award. White is being honored for his papers on stability analysis and design and the flexural provisions of the 2005 AISC *Specification for Steel Buildings* published in the ASCE *Journal of Structural Engineering* and AISC's *Engineering Journal*.

The T.R. Higgins Lectureship Award is presented annually and recognizes an outstanding lecturer and author whose technical paper(s) are considered an outstanding contribution to the engineering literature on fabricated structural steel. The award, which includes a \$10,000 prize, will be presented at the 2009 NASCC: The Steel Conference in Phoenix in April.

"Don's work forms the foundation of many of the new provisions in the 2005 AISC *Specification*," commented Charles J. Carter, S.E., P.E., AISC vice president

and chief structural engineer. "He's a particularly productive researcher, author, and lecturer. We're fortunate to have him as a contributor to the advancement of fabricated structural steel and as a member of the Committee on Specifications. He's an outstanding selection as the T. R. Higgins Lectureship Award winner."

White has been a member of the Georgia Tech faculty since 1997. Prior to joining Georgia Tech, he served on the faculty at the Purdue University School of Civil Engineering from 1987 to 1996. He received his doctorate in Structural Engineering from Cornell University in 1988 and attended North Carolina State University for graduate school.

He's a member of the AISC Committee on Specifications as well as various other AISC technical committees. He's also a member of the American Iron and Steel Institute (AISI) Bridge Research Task Force and the Structural Stability Research Council (SSRC). In addition to his con-

tributions to the 2005 AISC *Specification for Structural Steel Buildings*, he served as a major contributor to the 2004 update of the American Association of State and Highway Transportation Officials (AASHTO) Load and Resistance Factor Design Specification provisions for curved and straight steel bridge design.

White received the 2005 Special Achievement Award from AISC for his research on design criteria for steel and composite steel-concrete members in bridge and building construction, and the 2006 Shorridge Hardestey Award from ASCE for his research on advanced frame stability concepts and practical design formulations. He's an associate editor of ASCE's *Journal of Structural Engineering* and serves on the Editorial Board of the *Journal of Constructional Steel Research*.

To view a few recent samples of White's writing, visit www.aisc.org/donaldwhite.

People and Firms

• Structural Engineering firm **Thornton Tomasetti** last month opened two new offices in the United Arab Emirates of Dubai and Abu Dhabi to accommodate the firm's expanding business development and extensive involvement in more than a dozen current, high-profile projects in the Middle East. Kyle Krall, a principal with Thornton Tomasetti, will relocate to the region in January to operate both offices.

Thornton Tomasetti also announced the following promotions at the firm's New York office: Erleen Hatfield, P.E., LEED AP, Ling-En Hsiao, Ph.D., Gary Mancini, P.E., LEED AP, and Michael Squarzi, P.E., have been promoted to senior vice president/principal. Hi Sun Choi, P.E., and Jeffrey Schreier have been promoted to principals. Jan Kalas, AIA, was promoted to senior vice president. And Eli Gottlieb, P.E., and Libero Petrella, P.E., were both promoted to vice president.

• Members of the **Structural Engineers Association of California** elected Reinhard Ludke, S.E., to serve as president of the association and lead the nine-member Board of Directors. Ludke has been practicing structural engineering and involved in construction since 1969. He is the principal structural engineer with Creegan + D'Angelo

Infrastructure Engineers' transportation, water, buildings, public works, and earthquake-performance projects.

• **Design Data** announced that Jim Dager recently retired as company president. Dager will maintain ownership of Design Data and will continue to be involved in monthly management meetings. Damon Scaggs, who currently serves as Design Data's executive vice president, will take over as company president and chief executive officer. Barry Butler, senior development manager, will take on the role of executive vice president.

• Management consulting and research firm **ZweigWhite** has identified the 200 fastest-growing architecture, engineering, and environmental consulting firms for its annual ranking, *The Zweig Letter Hot Firm List*. This annual list features the design and environmental firms that have outperformed the economy and competitors to become industry leaders. The top 10 firms on the list are:

1. WSP Group (USA), New York, N.Y.
2. Hill International, Inc., Marlton, N.J.
3. ARCADIS U.S., Inc., Highlands Ranch, Colo.
4. NELSON, Philadelphia, Pa.
5. Natural Resource Group, LLC, Minneapolis, Minn.
6. TolTest, Inc., Maumee, Ohio

7. Stantec Consulting Inc., Irvine, Calif.
8. X-nth, Maitland, Fla.
9. ITAC Engineers and Constructors, Chester, Va.
10. Trow Global Inc., Brampton, Ontario, Canada

A complete list of the 200 fastest-growing architecture, engineering, and environmental consulting firms was published in the November 3, 2008 issue of *The Zweig Letter*. Visit www.zweig-white.com.

• **Hobart Brothers Company** recently announced the expansion of its manufacturing operations into a new 65,000-sq.-ft facility in Troy, Ohio. The new facility will be used to increase production capacity for the company's welding consumables. The company anticipates that an additional 40 people will be added to its workforce once the new plant is at capacity. The new building is scheduled to be completed by this coming spring.

• **Tennessee Galvanizing** was recently recognized by the Tennessee Chamber of Commerce and Industry for outstanding environmental accomplishments at the annual Tennessee Chamber Environmental Conference. The company was awarded certificates for Hazardous Waste Management and Environmental Excellence.

IN MEMORY

A Half-Century Dedicated to the Steel Industry

It is with deepest sadness that I report that our good friend and colleague Bill Liddy passed away on October 29. Bill was a proud representative of the steel industry for more than half a century. Working for American Bridge and U.S. Steel in his early professional years, after graduating from college in the early 1950s, he remained as an ambassador for steel construction until his passing. Bill culminated his long career in the steel industry working for AISC. He formally retired in the spring of 2007 and was awarded a Lifetime Achievement Award at the 2007 NASCC at the time of his retire-



ment. He was also recently honored for his long service to the steel industry by the

AISC Board of Directors (see related story on pg. 21).

Bill's constant smile and friendly disposition made him a friend of multitudes associated with the steel, design, and construction industries, as well as those he met in his personal life. Those of us that have known and worked with Bill for many of those

50-plus years, as well as those that had the opportunity to work with him for only a few months, shared the feeling that Bill was a true friend.

— Kurt Gustafson

Former AISC Board Member Dies

Former AISC Board of Directors member (1974-1976) David Kingsnorth Patterson, Sr. passed away at his home in Binghamton, N.Y. on October 26 from complications of Parkinson's Disease. He

moved to Binghamton with his family in 1955 to join Binghamton Steel and Fabricating, Inc., where he eventually became president. He was 85.

PROJECTS

L.A.'s First Steel-Plate Shear Wall High-Rise

AISC recently launched a new web site and portal, www.aisc.org/LA-LIVE, that features the latest information on the L.A. Live Hotel and Residences project, the first steel-plate shear wall high-rise building in Los Angeles.

With eye-catching images of the project site and a live webcam of the structure, the L.A. Live web site showcases

the hotel and residences building as the centerpiece of the L.A. Live development, a 4 million-sq.-ft., \$2.5 billion downtown Los Angeles sports, residential, and entertainment district development adjacent to the Staples Center and Los Angeles Convention Center. The 56-story structure will house 1,001 hotel rooms and

224 luxury condominiums. The total development cost is pegged at about \$1.0 billion for 2 million sq. ft of space.

L.A. Live Hotel and Residences broke ground on November 2007, and structural steel erection is expected to be completed by the end of 2008, which is about two months ahead of schedule; the expected opening time frame is early 2010.

The idea for the L.A. Live Hotel and Residences structure was born in March 2006, when Nabih Youssef Associates reviewed the conceptual design and suggested replacing the heavy 30-in. concrete shear walls with light ¼-in. to ⅜-in. steel-plate shear walls to free valuable real estate space; eliminate 35% of the weight of the structure; and reduce seismic design forces and foundation sizes. As a result, the proposal compressed the construction schedule and budget while allowing for more simplified and efficient construction. Nabih Youssef Associates was then hired by the development group, AEG, to convert the 56-story concrete shear wall design to a steel-plate shear wall system solution.

For more information on the steel-plate shear wall system, please contact the AISC Steel Solutions Center at 866.ASK.AISC or solutions@aisc.org.



NSBA Reorganizes, Strengthens Mission to Grow Steel Bridge Market

The National Steel Bridge Alliance, a division of AISC, today announced a reorganization that balances its mission between marketing activities to promote the use of steel bridges, legislative activities, and technical support for bridge designers, owners, and fabricators.

"During the past six years, the NSBA has spent an increasing amount of its resources on legislative action," explained Jack Klimp, chairman of the NSBA executive committee and general manager of Cianbro Fabrication and Coating Corporation in Pittsfield, Maine. "While we still need to continue our legislative activities, we also need to achieve a greater balance between our legislative, technical, and marketing work. In addition, we can achieve more cost-effective results by working more closely with other trade groups with legislative initiatives compatible with ours, as well as strategic use of Washington-based consultants."

Under the reorganization, the NSBA will continue its regional activities and will also integrate its technical activities into the popular AISC Steel Solutions Center. The AISC Steel Solutions Center is a one-stop source for technical information and conceptual solutions for the steel construction industry. The team of structural engineers and consultants answer more than 200 technical inquiries each week at no charge to designers, owners, and fabricators. In addition, they provide conceptual studies comparing steel solutions to designs in alternate materials. The conceptual solutions include framing system comparisons, as well as cost and scheduling information. A direct link to the AISC Steel Solutions Center for bridge-related questions and studies will soon be available at www.steelbridges.org/solutions. (For more information about the AISC Steel Solutions Center, please visit www.aisc.org/solutions or call 866.ASK.AISC.)

The NSBA is a unified industry organization of businesses and agencies interested in the development, promotion, and construction of cost-effective steel bridges. Activities include development of the *Steel Bridge Design Handbook*, hosting the World Steel Bridge Symposium, and fostering the AASTO/NSBA Steel Bridge Collaboration, a group dedicated to achieving quality and value in steel bridges by standardization of design, fabrication, and erection and the sharing of resources.

Know Your Bolts

In the past few months, photographs of bolts with what appear to be raw material seams have been circulating on the Internet. These photographs have generated concerns in the industry about what is done or should be done to prevent similar bolts from being used on structural steel construction projects. This has prompted concerns from owners and engineers regarding the quality levels of fasteners manufactured to ASTM standards, particularly overseas.

Over the years, and primarily due to the requirements of the Fastener Quality Act, a detailed infrastructure has been developed to assure quality in fasteners. Manufacturers must produce bolts under an acceptable quality management system; ISO 9000 would be an example of such a system. Acceptable quality management systems require many in-process quality control inspections. Manufacturers also conduct quality assurance inspections on a randomly selected sample of the fasteners they produce. These inspections are defined in the individual fastener specifications and include dimensions, hardness, thread fit, wedge tensile, and surface defect inspections. The surface defects shown in the pictures that have brought this issue to the attention of the industry are defined in ASTM F788/F788M. This standard indicates that seams such as those shown in the pictures do have an acceptable limit, but without the supporting results of a comprehensive evaluation, it is impossible to say whether the bolts in the pictures complied with the specification.

In the U.S. construction industry, the fasteners may also undergo one of two other tests. In the building industry, the installer conducts Preinstallation Verification Tests on bolts in connections requiring full tensioning. Bolts from each lot are tightened in the tension-measuring device to the minimum required pretension to ensure the bolt assembly and installation method can develop the required clamp load. Additionally, all galvanized structural bolts, as well as all structural bolts used on bridges, are Rotational Capacity Tested. The Preinstallation Verification Test is described in the Research Council on Structural Connections' *Specification for Structural Joints Using A325 or A490 Bolts* (2004). There are two versions of the Rotational Capacity Test. One is described in the ASTM A325/A325M standard. The other is in the AASHTO specification.

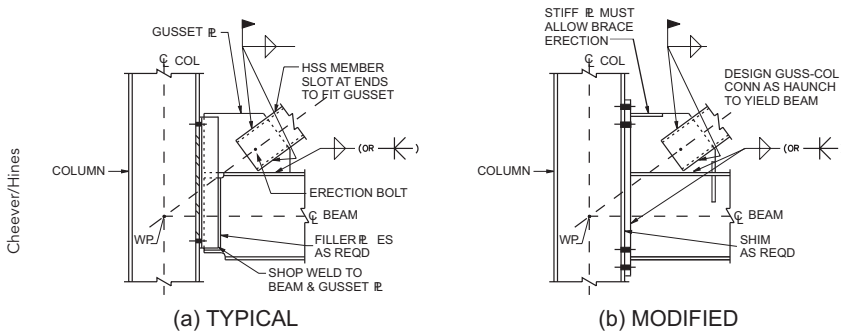
Many years ago there were concerns about fastener quality. In response, quality systems were developed to provide assurance that fasteners were manufactured in compliance with standards. The recent incidents are a good reminder that owners and suppliers should be acquiring fasteners from manufacturers that have implemented acceptable quality systems. This can be done by knowing your supplier and asking about the quality systems their manufacturers use. Suppliers should be able to tell you reasonably quickly whether the manufacturer is certified to ISO or some other recognized quality system. This should be a simple step, and when performed, should be sufficient to verify the quality of the bolts. - *Chad Larson, Vice President, LeJeune Bolt Company*

Gusset Plate Behavior

As $R = 3$ lateral systems gain popularity in moderate seismic regions, the need for rigorous assessment of these systems' collapse performance grows stronger. In particular, $R = 3$ concentric braced frames depend on the inherent reserve capacity of their buildings' gravity framing systems to maintain stability during a maximum considered earthquake event. The role that gusset plate connections play in such reserve systems after brace fracture, if better understood, could be leveraged to ensure adequate reserve capacity with minimal cost increases. The below figure compares a typical gusset plate connection (a) to a possible modified end-plate connection designed for higher ductility levels (b). Design measures for gusset plates that act as ductile, haunched beam-column connections after brace fracture are the subject of current collaborative research between Tufts University and the University of Illinois, Urbana-Champaign (UIUC).

Based on innovative lateral system design concepts developed by LeMessurier consultants for a 1,200-bed, 600,000-sq.-ft dormitory at Northeastern University, a suite of full-scale tests was developed to evaluate gusset plate behavior at large drift levels. The test units were designed by UIUC researchers in collaboration with researchers at Tufts University and engineers at LeMessurier consultants. The test units were donated by Novel Iron Works, who fabricated them at their main shop in Greenland, N.H. Complete inspection services were provided by Briggs Engineering of Rockland, Mass. AISC sponsored transportation costs to UIUC as well as part of the test set-up costs.

The $R = 3$ concept was advanced by AISC in its 1997 *Seismic Provisions* as a minimum seismic design standard for those structures in Design Categories A, B, and C not required to adhere to the *Provisions*. The approach requires no specific seismic detailing and relies on the inherent reserve capacity of steel structures to ensure stability during major earthquakes in moderate seismic regions.



AWARDS

AISC Recognizes Outstanding Achievements at Annual Meeting

AISC's Lifetime Achievement and Special Achievement Awards were presented at the 2008 AISC Annual Meeting in Colorado Springs, Colo., held September 11-13.

AISC's Lifetime Achievement Award honors living individuals who have made a difference in the structural steel industry's success. This year's award was presented to Bill Liddy and Bert Cooper.

Bill Liddy spent nearly 60 years in the steel industry, first promoting structural steel for the mills, then as a regional engineer with AISC, and finally as an advisor in the AISC Steel Solutions Center. He worked closely with the fabrication industry, especially in the Midwest, and was very respected by both the fabrication and design community. He also acted as a mentor for younger staff at AISC. Sadly, Bill passed away in October (see pg. 19).

Bert Cooper is a long-time contributor to the structural steel industry as both an AISC board member and as the owner of

a leading fabrication firm, W&W/AFCO Steel. He's contributed substantial time and financial resources to support steel industry research activities.

AISC's Special Achievement Award gives 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 2008 Special Achievement Award was presented to William W. Brown and Joseph J. Hunt.

Brown is the president of Ben Hur Construction Co. and Hunt is the general president of the International Association of Bridge, Structural, Ornamental and Reinforcing Iron Workers. They were awarded this year's Special Achievement Award for their work in developing and nurturing I.M.P.A.C.T., which is a labor/

The Right People for the Job

I've been subscribing to MSC for a few years now and I've always enjoyed Scott Melnick's editorials.

His last one, relaying Howard Putnam's comments [on hiring practices], really struck a chord with me, as much of my time over the last three years has been trying to hire the right people. These are all excellent points.

I just wanted to let you know that your work is relevant and appreciated. Great job, and please keep up the good work!

Sam DeFranco
Engineering Authority
BP America, Inc.

management partnership designed to bring together local unions and their signatory contractors to address mutual problems and create solutions to those problems.

For more information on AISC's Individual Awards and past recipients, please visit www.aisc.org.