

NASCC

Student and Educator Opportunities at NASCC

For students and teachers, NASCC: The Steel Conference can serve as a Spring Break of sorts—albeit one where steel, not sand and sun, is the focus.

In addition to the dozens of specialized sessions on buildings and bridges that will take place at NASCC in St. Louis, April 17–19, this year's conference also offers special educational opportunities for students and educators.

The third annual Students Connecting with Industry Sessions (SCIS) program will be held at the conference on Thursday, April 18, from 10 a.m.–2:15 p.m. John Hooper of Magnusson Klemencic Associates and Karl Frank of Hirschfeld Industries (an AISC member/AISC certified fabricator) will present a special session titled, "Tips for Starting Your Career." The day will also include lunch, a tour of the exhibit hall and the "Direct Connect" session where students can interact one-on-one with about 40 key representatives from the structural steel industry.

For AISC student members, registration to NASCC and the SCIS program is complimentary. Students who attend the entire SCIS program will receive a complimentary ticket to Thursday night's conference dinner at the City Museum, as well as up to \$175 in travel reimbursement. Registration is required and can be done online at www.aisc.org/nascc by selecting the "Student Session" option in the "a la carte pricing" portion of the registration form.

The Educator Session will be held on Wednesday, April 17, from 8 a.m. to noon and include presentations on "Bridge Plate Girder Design by the Numbers," "Bridge Design for Economy of Construction" and "Bridge Design for Aesthetics." Registration for this complimentary session is required and can also be done at the conference website by selecting the "Educator Session" in the "a la carte pricing" portion of the registration form.

IN MEMORIAM

Bill McGuire, Engineering Visionary, Dies at 92



William (Bill) McGuire, P.E., Ph.D., professor emeritus at Cornell University, passed away on January 31 at his home, surrounded by family. He was 92 years old.

McGuire had long been recognized as a structural engineering visionary and had the reputation for looking at how technology may advance in the

future and how engineers and society can prepare for it. This foresight won him ASCE's Norman Medal in 1962 (with G.P. Fisher) for an atomic power plant containment design and led him to write one of the most widely respected textbooks on steel design, *Steel Structures*, in 1968.

In 1992 he won AISC's T.R. Higgins Lectureship Award for his application of computer graphics to the structural engineering industry. In 2000 he won AISC's Geerhard Haaijer Award for Excellence in Education for his role in advancing the use of structural steel framing. He was also instrumental in the AISC Committee on Specifications through the early 1990s.

McGuire joined the faculty of Cornell University's School of Civil Engineering in 1949 and was named professor emeritus after 40 years of service in 1989.

You can read more about McGuire's contributions to the structural steel industry in the June 2000 article "Looking Ahead" (at www.modernsteel.com).

People and Firms

- **Robert Alonso**, S.E., P.E., was promoted to office manager for the Orlando office of **Finley Engineering Group, Inc.**, where he will be responsible for business activities, project management and staff supervision for complex bridge design projects.



- **The Nemetschek Structural Group** announced today that it is accepting submissions for its **2013 International Engineering Contest: Inspirations in Engineering**. The competition recognizes outstanding achievements and innovative works from the world's top engineering and construction professionals. The deadline for submissions is March 31. The contest is open to all users of Nemetschek Structural Software. Winners will be drawn from five categories: Buildings, Civil Structures, Design of Industrial Buildings and Plants, Industrialized Planning and Special Projects. For more information, visit nemetschek-scia.com/contest.

- Structural and civil engineering firm **JQ** has promoted five individuals in its Dallas and Austin offices. **John J. Hoenig**, P.E., has been promoted to Partner. **Murali Kariyarvedu**, P.E., **Carlo N. Taddei**, P.E., and **Jamie Buchanan**, P.E., have been promoted to Principals. **Douglas Rothermel**, P.E., has been promoted to Associate.

- **FabTrol Systems** and **ATek Automation** have teamed up to help steel fabricators review 3D representations of CNC data in **FabTrol Pro**. Imports from modeling software such as **Tekla** and **SDS/2** into FabTrol Pro can automatically include DSTV files for all parts, allowing fabricators to use ATek's free DSTV viewer to launch a 3D view of each part from FabTrol Pro's bill of materials screen. For more information, visit www.fabtrol.com or www.atekautomation.com.

IN MEMORIAM

Paul Sullivan, Bridge Engineering Expert, Dies at 86

Paul James Sullivan, P.E., a retired bridge engineer with the Commonwealth of Massachusetts, passed away on January 10 in Boston, surrounded by his family. He was 86 years old.

Sullivan was a proud public employee and union member. His career at the Massachusetts Highway Department included instituting and leading the first Quality Control Program for Bridge Erection in the Commonwealth, a program that became a model for other states, and he rose to the position of bridge engineer before his retirement. His contributions to bridge safety were recognized when he became the first public official to receive the American Road & Transportation Builders Association's prestigious "Lifetime Achievement Award."

Sullivan devoted many voluntary hours to the American Welding Society toward the development of welding standards and procedures for aluminum and steel. He was a tireless advocate for his fellow workers and became president of the then Local 780 of AFSCME (American Federation of State, County and Municipal Employees).

An advocate of lifelong learning, Sullivan earned a Bachelor's degree and multiple Master's degrees in political science, urban planning and education from the University of Massachusetts-Boston, Boston State College

and Rutgers University. He served in the South Pacific during World War II as a U.S. Marine and was a lifelong member of the Disabled American Veterans.

Sullivan is survived by his wife of 40 years, Toby Pearlstein, a son, a daughter and two grandchildren.



SOCIAL MEDIA

AISC Launches New Facebook and Twitter Pages

AISC is now officially on Facebook and Twitter! The social media sites will be used to provide up-to-date information on AISC and industry happenings, as well as opportunities for instant communication and networking with the steel design and construction community and the general public.



AISC's official Facebook and Twitter pages will feature the latest AISC news and event updates, member benefits and announcements, public contests and more. In addition, they'll provide an open forum for interaction and discussion with engineers, architects, general contractors, steel fabricators and producers, owners, students, educators and others involved in the structural steel industry.

AISC's official Facebook page can be found at www.facebook.com/AISCdotORG. Simply "Like" the page to join. (This page was formerly called the AISC University Relations page.) The new page features expanded offerings and provides a broader range of AISC information. (Those who had joined the original page will still receive updates for faculty and students and do not need to re-join the page.)

When it comes to Twitter (www.twitter.com) you can follow AISC at its new official handle: [@AISC](https://twitter.com/AISC)

You can also follow AISC's other social media pages to stay up-to-date on everything related to steel design and construction of buildings and bridges:

- Follow *MSC* on Twitter: [@ModernSteel](https://twitter.com/ModernSteel)
- Follow the National Steel Bridge Alliance (NSBA), AISC's bridge division, on Twitter: [@SteelBridges](https://twitter.com/SteelBridges)
- Join AISC's LinkedIn (www.linkedin.com) group under "American Institute of Steel Construction"
- Receive the latest updates on SteelDay (www.SteelDay.org), the structural steel industry's largest networking and educational event for the design and construction community and the public, by

following [@SteelDay](https://twitter.com/SteelDay) on Twitter and liking SteelDay's page on Facebook (search on "SteelDay"). The fifth annual SteelDay will take place October 4, 2013.

AISC will continue to use its website as its primary online presence. Members and others should refer to www.aisc.org for detailed information and service-related questions. If you need technical assistance, innovative solutions or tools for your next project, AISC's Steel Solutions Center is your go-to resource for the latest structural steel information. To learn more and to contact the Steel Solutions Center, visit www.aisc.org/solutions or call 866.ASK.AISC (866.275.2472).

For questions, comments or feedback on AISC's new Facebook and Twitter pages, please contact Victoria Cservenyak at cservenyak@aisc.org.

CORRECTION

In the January article "Outside In," the connection drawing on page 54 and the 3D model on page 53 were attributed to the project's structural engineer, Kibler & Kibler. They were actually created by AISC member detailer Vachon Drafting, Inc.

SOFTWARE

AISC Membership Saves a Fabricator from Huge Fines for Pirated Software

When an employee downloaded a pirated copy of Tekla Structures software, it almost cost the fabrication company more than \$100,000. While this mid-sized fabricator/erector has a small drafting department, they don't regularly detail steel. Unfortunately, when one of the draftsmen noticed a small problem on a shop drawing, instead of sending it back to the detailer for correction, he—against company policy—downloaded a pirated version of Tekla Structures and made the corrections himself.

Tekla, as with many other sophisticated software companies, has built-in protections so that they can tell when a computer using a pirated copy of their software connects to the Internet, explained Joel Beres, an attorney with Stites & Harbison, a well-known law firm with expertise in the fabrication and design market. "Sometimes software manufacturers are alerted to a problem by technological means. Other times they're tipped off by a former employee or a disgruntled current employee. Either way, an individual infringer can be liable for either actual or statutory damages," Beres said. While in this case the unauthorized software was Tekla Structures, it could just as easily have been SDS/2 from Design Data or any other software package.

Statutory damages can range from \$750 to \$30,000—but if the court finds the infringement was willful, the penalty can be increased to \$150,000. Alternatively, the infringer may be responsible for the actual damages suffered (in this case the price of the software license) and in some cases they can also be required to pay attorney and court costs.

"Even if a company has a strict policy and a rogue employee violates it, the company is liable," explained David Ratterman, another attorney at Stites & Harbison and AISC's legal counsel. "At best, the discovery of the use of illegal software may slow down the completion of a project; at worst it could result in construction errors."

Even though the AISC member fabricator with the pirated software has a policy against the use of illegal software and the action was taken by a rogue

employee, the simple fact of having illegal copies of software downloaded to a company computer makes the company potentially liable. "When the company found out, they took steps to address the infringement. Even so, damages could have been in the six figures," Beres said.



Fortunately, AISC and Tekla have an agreement to forgive an AISC member fabricator the first time this type of event occurs.

Tekla agrees to desist from enforcement activities seeking monetary damages or other compensation against AISC full members where there has been an initial instance of unauthorized use of a TEKLA product by a member or its subcontractor but that initial unauthorized use has been unintentional, incidental, or uninformed and, upon (i) such member becoming aware of such illegal use or (ii) Tekla's written notification, the infringing software is promptly removed from the full member's or subcontractor's computer systems or a license fee is promptly paid. This forbearance would not apply to subsequent unauthorized use after the AISC full member has been properly notified by Tekla representative and warned of the consequences of its actions.

As a result of this agreement, Tekla did not pursue monetary damages or other compensation against the AISC member fabricator.

It's important to note that a fabricator may be liable even if the pirated software is being used by their subcontractor and not their own employees. "Depending on your contract language, you can have liability," Beres clarified. "Also, liability may depend on the level of the file that is sent—for example, if you need to have

a copy of the program or a viewer to see the file. In most cases, if you have a legal copy of the software you may be protected even if your subcontractor has a pirated version."

Whether you're a fabricator, a designer or a detailer, it's critical that you do everything you can to ensure that both your software and the software used by your subcontractors or vendors is fully licensed at all of their workstations. It is recommended that every firm has a formal policy against the use of pirated software and they also conduct audits of their own workstations. "For every piece of software installed on any of your computers, you should have a record of the purchase and/or the software license," advises Chris Moor, AISC's Director of Industry Initiatives. "Beware of 'free' or greatly reduced prices for software downloads. If the deal is too good to be true, it probably is and may be an unauthorized copy."

Moor also recommends you use the Internet to research complaints against software vendors and whether they promote themselves as an "authorized reseller."

Fortunately, both Tekla and Design Data offer an easy way to check if software is fully licensed, though currently only Tekla has entered into a formal agreement with AISC regarding full members' inadvertent use of pirated software (to AISC's knowledge, Design Data has not pursued penalties in these instances).

For Tekla, you can visit www.tekla.com/international/about-us/anti-piracy/Pages/piracy.aspx. An online form allows you to enter the name of a company and get a license check on their software. In addition, you can call 877-tekla-65 or email license.compliance@tekla.com.

Design Data has implemented a customer ID system to check for unlicensed software. Each licensed customer is given a unique ID code that can be checked at www.sds2.com/legal. Customers are encouraged to put their ID on all their bids, drawings, and other documentation. You can also contact Design Data's software piracy investigator, Thomas A. Duden, at 402.450.8926, 800.443.0782 or tom@dsndata.com.

CERTIFICATION

What You Need to Know about AISC's Updated Bridge Certification Program

Whether you design or build bridges, revisions to AISC's Bridge Quality Management System (QMS) Certification Program will impact your work. The updated Program introduces Requirements that include three categories: Simple Bridge, Intermediate Bridge and Advanced Bridge, as well as a requirement mandating the *Standard for Steel Bridges—2011 (AISC 205-11)* that negates the previous checklist criteria—a move previously accomplished with AISC's Building and Bridge Component QMS Programs.

"This Program change will assist our certified participants by better communicating to owners, specifiers and others in the construction industry what the QMS Certification Program provides in terms of quality and expectation," said Jacques Cattan, AISC vice president of certification.

In addition, the updated Program now includes requirements for definitions, scope review, contract review, document control and training. Plus, many requirements have been detailed more thoroughly and others now require additional written procedures. (To review a copy of the *Standard for Steel Bridges*, please visit www.aisc.org/certdocs and find the standard listed under the "Bridge QMS Certification" header, and for a comparison of the previous checklist to the *Standard*, please visit www.aisc.org/bridgecertification and click on the article "Transitioning between the New Bridge Standard and a Checklist.")

"The reason for these changes is to continue to evolve and advance our program, not only at the request of the bridge marketplace but also to continually improve our own certified participants, which will improve the bridge fabrication industry as a whole," stated Cattan. "And the program offers the bridge industry a valuable means for qualifying bridge fabricating facilities and serves as an effective way for those facilities to communicate their commitment and capability with respect to quality."

Again, the new Program will have three levels (Simple Bridges, Intermediate Bridges and Advanced Bridges) rather

than two categories (simple bridges and major bridges) as was previously the case.

► **Simple Bridges** consist of unspliced rolled sections. To apply for this category, the fabricator shall meet the *Requirements AISC Certification Program for Steel Bridge Fabricators*.

► **Intermediate Bridges** are typical bridges that do not require extraordinary measures. Typical examples might include: (1) a rolled beam bridge with field or shop splices, either straight or with a radius over 500 ft; (2) a built-up I-shaped plate girder bridge with constant web depth (except for dapped ends), with or without splices, either straight or with a radius over 500 ft; (3) a built-up I-shaped plate girder with variable web depth (e.g., haunched), either straight or with a radius over 1,000 ft; (4) a truss with a length of 200 ft or less that is entirely or substantially pre-assembled at the certified. Per the Supplemental Requirements of the *Standard for Steel Bridges*, to apply for this category the fabricator shall have supplied plate girder spans with field splices for highway or railroad bridges within the last five years, or established a documented training program for the purpose of communicating intermediate bridge work functions to the work forces, and demonstrated capability to fabricate intermediate bridges. Furthermore, the fabricator must also meet the additional requirements for fabrication process equipment, detailing standards and functions and shop assembly of field connections procedure as laid out in the Supplemental Requirements.

► **Advanced Bridges** are those requiring an additional standard of care in fabrication and erection, particularly with regard to geometric tolerances. Examples include tub or trapezoidal box girders, closed box girders, large or non-preassembled trusses, arches, bascule bridges, cable-supported bridges, moveable bridges and bridges with particularly tight curve radius. Per the Supplemental Requirements of the *Standard for Steel Bridges*, to apply

for this category the fabricator shall have met the requirements set forth for intermediate bridge fabricators. Additionally, the fabricator shall have supplied advanced bridges for highway or railroad applications within the last five years or shall have supplied intermediate bridges for highway or railroad use, established a documented training procedure for the purpose of communicating advanced bridge work functions to the work forces, and demonstrated capability to fabricate advanced bridges. Furthermore, the fabricator must also meet the additional requirements for their contract and project specification review and communication procedure and their welding procedure as laid out in the Supplemental Requirements.

"We surveyed a number of bridge fabricators and discovered that those who were also certified for the Building and Bridge Component QMS Programs were very supportive of the transition to the updated requirements," explained Cattan. "However, those who had never worked with a similar program were uncertain about the impact of the change." To help, AISC offers a detailed chart showing the main differences. To view this information, visit www.aisc.org/bridgecertification and click on "Transitioning between the New Bridge Standard and a Checklist." Another useful document is the *Requirements AISC Certification Program for Steel Bridge Fabricators*. These Requirements are the administrative rules and technical regulations for the Program and provide direction above and beyond the requirements laid forth in the *Standard for Steel Bridges*. Each bridge participant should review the "Bridge Program Requirements" document found at www.aisc.org/bridgecertification.

By July 1st, 2014, all current participants will have been certified to the updated requirements and will hold one of the new designations.

For additional information, please visit www.aisc.org/bridgecertification or call 312.670.7520.