



STRUCTURAL ENGINEERS OF COLORADO

NEWSLETTER

**2021 FALL SCHEDULE
SIGN UP FOR THESE EVENTS
AT
[HTTPS://
SEACOLORADO.ORG/](https://seacolorado.org/)**

SEAC Meeting

September 16, 2021
Denver Marriott West
and Via Webex
7:45am-9:00am

SEAC NOCO Committee Meeting

September 16, 2021
Front Range Community
College
7:30am-9:00am

SEAC SOCO Committee Project Presentation—

Pikes Peak Summit House
September 21, 2021
CTL Thompson, Colorado
Springs or virtual
11:30am

SE/PE AASHTO Review Session

September 22, 2021
virtual
6:30-8:00pm

SEAC Fall Seminar

October 7, 2021
Doubletree Hilton West-
minster or virtual
7:00am—12:00pm

September General Meeting

SEAC September General Meeting

September 16, 2021
virtual and in-person

Denver Marriott West, 1717 Denver West Blvd.

7:45AM Announcements/8:00AM Presentation

Presentation with Rocky Mountain Steel Construction Assn.

1 PDH

Have you ever searched for information on structural steel construction with a slant towards the Rocky Mountain region, but come up short? Are you interested in the opinions of other professionals within the steel construction industry on how they tackle common challenges? Join the SEAC/RMSCA Steel Liaison Committee on September 16th as they travel into *The Before Time* and summarize updates made to historic white papers prior to their Grand Republishing.

Presenters:

Paul Wareham:

Paul leads the Sales and Estimating Department at Zimkor, a local steel fabricator in the Denver area. He began his professional career in steel after graduating from the Colorado School of Mines spending 5 years estimating and project managing. From there he spent several years in other engineering, manufacturing and management positions in various disciplines including centrifugal pumps/compressors, water and wastewater, aviation and natural gas before returning to steel 4 years ago. Paul is a registered Professional Engineer in the State of Colorado.

Alex Stone:

Alex is a Project Manager and Associate at KL&A with 13 years of experience in structural engineering. He has been the project manager and engineer of record for numerous high profile steel construction projects with a focus on higher education, offices, municipal and medical office buildings. His expertise includes conventional steel frame design, connection design and high seismic design. He received his bachelor's and master's degree from Colorado State University.

Scott Luckiesh:

Scott is a Structural Project Manager for BKMB in Denver. His experience spans a broad spectrum of building types, including health care facilities, parking structures, schools, government buildings, corporate headquarters, office buildings, industrial buildings, residential complexes, and correctional facilities. He has worked on phased, multiple-bid projects with construction costs of up to \$250 million. He is proficient in many types of structural systems; steel, masonry, cast-in-place and precast concrete, heavy timber, and glulam. He received his Master of Structural Engineering degree from the University of Texas - Austin in 1994 and Bachelor of Architectural Engineering from Oklahoma State University in 1993. Publications include the AISC Hollow Structural Sections Manual where he assisted in development of tension and compression connections for HSS end connections.

Taylor Maggert:

Taylor hopes to use his 17+ years of experience in facades, structural engineering, architectural and structural steel (estimating, detailing, erection, and project management) to improve processes and flows in design and construction. He currently uses his experience as a Senior Product Specialist for Tekla software (Trimble Solutions).

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PRESIDENT'S MESSAGE

Structural Engineers Association of Colorado

On July 23, I-70 through Glenwood Canyon was severely damaged due to a major mudslide with no major casualties, thankfully. Wildfires and unprecedented rainfall events combined to create this disaster. Some have asked how this could happen and why wasn't the road built for this. As industry insiders, we know nature is unpredictable and we cannot design for every eventuality. There is always a cost to benefit analysis and seemingly, more often cost weighs in heavier than other considerations.



This cost to benefit analysis is embedded in everything we do as engineers. When discussing a public facility in a small town on the eastern plains of Colorado, the town noted they wanted the structure to function as a "quasi" storm shelter. They do not currently have *any* publicly accessible storm shelters and their geographical location is prone to tornados. However, the added cost to make the facility storm safe did not seem worth the benefit to the decision makers. They have been voted into office to make these kinds of decisions, but I couldn't help thinking how different they would feel if they were to suffer a personal loss that could have been avoided if the facility functioned as a shelter. Tipping my hand, I always lean toward spending a little more to provide better protection, easy enough to do when it's not your money.

Hindsight is always clearer than predicting the future and with climate change, trying to decipher what is coming is increasingly difficult. As SE's the best we can do is to diligently follow the codes and get involved in changing them when needed.

Below is a link to a video CDOT released showing the extent of the damage to the I-70 Glenwood Canyon roadway and following the drainageway upstream.

<https://unofficialnetworks.com/2021/08/04/cdot-drone-footage-i70-glenwood-canyon-mudslide-damage/>

Sincerely,

Lacey Goetz

Welcome to our Newest Members

Abraham Chen
Professional Member

Michael Gritzmacher
Professional Member

Michael McGuire
Professional Member

Samantha Grey
Professional Member

Landon Harman
Professional Member

COMMITTEE NEWS

Structural Engineers Association of Colorado

SEAC Education Committee August Project Presentation and Tour Recap

On August 31st, SEAC members and guests learned about one of the newest additions to Denver's LoDo neighborhood. The Education Committee was proud to host Martin/Martin structural engineers Abe Chen, PE and Bruce Hall, PE, in addition to project architect David Carnicelli of Stantec and contractor John Naccarato of Hensel-Phelps, for a presentation on the design and construction of McGregor Square which is located right next the Coors Field. The presentation was hosted at the Alliance Center meeting space in LoDo.

The event marked the SEAC Education Committee's first in-person event of 2021 and drew 30 attendees. The presenters shared design and construction challenges for the new 675,000 square foot mixed-use facility. The site consists of a hotel, condos, office space, retail, and public gathering spaces. The \$365 million cast-in-place concrete structure took a little over two years to complete and now proudly sits as the gateway to Colorado and the Rockies.

The presentation was followed by a fun tour of the finished building, which included seeing the future Colorado Rockies Hall of Fame, hotel rooms, various condo sizes, exercise facility, 12th story bridge, and rooftop pool.



COMMITTEE NEWS

Structural Engineers Association of Colorado

Remediation and Reconstruction of the Pikes Peak Summit House

Presenters: William C. Hoffmann, Jr, PE and Steve Horner, PE

Date: September 21, 2021, 11:30 am

Location: In-Person or Remote

In-Person: CTL Thompson Office, 5170 Mark Dabling Blvd, Colorado Springs, CO 80918

Remote: Virtual meeting invite will be emailed

[RSVP here](#)



The deteriorating and difficult to maintain 1960s-era Summit House spurred the need to establish a new facility. Beginning in 2018, the City of Colorado Springs, in partnership with the U.S. Forest Service, the U.S. Army Research Institute of Environmental Medicine and Colorado Springs Utilities, began construction on the new Pikes Peak Summit Complex, which includes the Visitor Center, a Utilities facility and a High-Altitude Research Laboratory. The project was the highest altitude construction site in North America, sitting on “America’s Mountain” at 14,115 feet. This project presentation will discuss the unique and complex geotechnical and structural engineering challenges the site presented including evaluating conditions in this remote location, designing on permafrost, and designing for high wind forces. Physically, completing construction at elevation posed tests and constraints, with weather being the largest challenge, followed by material and equipment delivery.

This project presentation is hosted by the SEAC Southern Colorado Committee. If you are interested in joining the committee, please contact jknakmuhs@ctlthompson.com.

Speakers:

William C. Hoffmann, Jr, PE has been with CTL | Thompson for over 40 years and Founder of the Southern Colorado Operations. He prepares geotechnical investigations for a wide variety of structures. His main focus is providing practical design alternatives for difficult construction situations and solving unexpected problems that arise during construction.

Steve Horner, PE has been with HCDA Engineering since 1997, after graduating from the South Dakota School of Mines and Technology. Over his career, he has designed a variety of projects including schools, medical and hospital facilities, retail centers and office and governmental buildings. Steve is a licensed Professional Engineer in Colorado and New Mexico.

COMMITTEE NEWS

Structural Engineers Association of Colorado

Gingerbread Bridge Competition

Register now to sponsor and/or participate in the 2021 Gingerbread Bridge Competition!

The 2021 Gingerbread Bridge Competition has been scheduled for the afternoon of **Friday, November 19th**. Doors open for display set-up at noon. Architectural judging starts at 1pm. Weigh-in and load testing to follow.

Final Event location TBD

The origin story for the Gingerbread Bridge Competition, rules for the 2021 event and past load test results can be found at <http://gingerbreadbridge.com/denver/rules-denver/>.

Important Deadlines:

Sponsors - Payment and logos due by Friday, September 24th

Bridge Entries - Payment and number of team members due by Friday, October 29th

****ATTENTION STUDENT TEAMS****

Prior to registering your team, please contact ymg@seacolorado.org indicating your interest in participating in the 2021 Gingerbread Bridge Competition. We will then provide you with a promo code to waive the bridge entry fee.

Please save all receipts for construction materials. Submit copies of your receipts at the check-in table when you arrive at the event for reimbursement of up to \$50/team. (Actual stipend for construction materials may be increased at the discretion of the YMG Committee based on the sponsorship received and the number of student teams participating)

Links of Interest

BEST Denver News Coverage: <https://www.facebook.com/watch/?v=1980848478839633>

Fox31 News Coverage: <https://www.youtube.com/watch?v=ZYECEwGFwRA&feature=youtu.be>

9News Coverage: <https://www.9news.com/article/entertainment/television/programs/next-with-kyle-clark/structural-engineers-in-colorado-take-on-a-gingerbread-house-challenge/362235262>



COMMITTEE NEWS

Structural Engineers Association of Colorado

SE/PE AASHTO Review Session - Wednesday, September 22nd

The SEAC YMG and Education Committee would like to invite you to the SE/PE Exam AASHTO Review Session led by Brandon Buder, P.E., S.E. with Parsons. The session will include a review of bridge design, including a review of the AASHTO code and discussion of practice problems.

Be sure to bring your AASHTO code and come prepared with questions. *If you have specific practice problems you would like to go over, please submit them to ymg@seacolorado.org by the end of the day on Sunday, September 19th.*

Date: Wednesday, September 22nd from 6:30-8pm

Where: MS Teams meeting. Call-in information provided below

RSVP: [Click Here](#) to register by the end of the day on Sunday, September 19th



WE ARE HIRING

Structural Department Office Lead

Are you ready for your next career move in Structural Engineering?

Stahly Engineering & Associates is looking for the next team member to join our growing structural engineering department. If you are ready to take on the challenge of leading a market sector in our **BILLINGS, MONTANA** office while being supported by a cohesive team of technical experts, we want to talk to you!



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www.seaeng.com/careers



LOCATION*:

Doubletree by Hilton Denver -
Westminster
8773 Yates Drive Westminster,
CO 80031

*SEAC follows CDC and local authorities
guidelines.

SEMINAR SCHEDULE: 4 PDH

7:00am - 7:40am

Registration/ Breakfast/ Networking with
Sponsors

7:40am - 9:45am

Announcements/ Overview of Mass
Timber Construction in 2021

9:45am - 10:00am

Break/ Meeting with Students/
Networking with Sponsors/ Raffle

10:00am - 12:00pm

Getting the Load from Here to There: Load
Paths, Diaphragm, and other Essentials

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SEAC Fall Seminar Payment

www.seacolorado.org

**Early Registration and Payment:
Deadline: Friday, September 24th**

**Regular Registration Online Payment
Closes: Monday, October 4th**

Refer to page 3 and 4 for additional information and
the in-person seminar or webinar fees.

2021 SEAC FALL SEMINAR

Thursday, October 7th

Overview of Mass Timber Construction in 2021

Presented by: Gregory R. Kingsley, PhD, PE, P.Eng. President and CEO, KL&A Inc. Structural Engineers and Builders, Golden, CO

The introduction and evolution of mass timber in the IBC may represent the most rapid development of a new, major structural material in the building code in the history of modern codes. It is hard to keep up. This presentation will include a rapid fire introduction to mass timber products and systems from the perspective of a structural engineer, with an emphasis on the new tall-wood provisions that created three entirely new building types in the 2021 IBC. General structural design will be addressed, including topics in connection design, diaphragm design, shear wall design, vibration and acoustics. A topic that is the centerpiece of mass timber design, design for fire resistance, will be addressed.

As a non-commodified material, mass timber often necessarily includes early engagement of fabricators and builders, not to mention estimators who may not be familiar with the systems. Structural engineers, too, may struggle to implement “the usual” solutions which have worked well for decades with other materials, but may not be right for mass timber.

Finally, a discussion of cost, value, and structural optimization will address the newest structural design criteria – embodied carbon – and the biggest roadblock to mass timber construction, even before the pandemic interrupted supply chains worldwide: cost.

Getting the Load from Here to There: Load Paths, Diaphragms, and other Essentials

*Presented by: Ron Klemencic, PE, SE, Hon. AIA, NAC, NAE
Chairman and CEO of Magnusson Klemencic and Assoc., Seattle, WA*

A complete load path which adequately and reliably delivers horizontal wind or seismic forces to primary vertical bracing elements of a building is essential to meeting performance objectives. Often, the analysis and design of Diaphragms, Chords, and Collectors are left to the end of the design process and are not well-considered.

In particular, diaphragm deformations, transfer forces due to offsets in the lateral bracing system, or back-stay effects associated with substructures are simply overlooked. This presentation will provide guidance regarding best practices and will highlight issues to identify and address early in the design process to ensure the desired design outcome.

Gregory R. Kingsley, Ph.D., P.E., P.Eng.



Gregory R. Kingsley, Ph.D., P.E., P.Eng. is the President and CEO of KL&A Inc., Structural Engineers and Builders in Golden, Colorado.

Greg Kingsley spent his early career and education focused on structural masonry design and research, culminating in a pseudo-dynamic test on a full-scale 5-story building at the University of California, San Diego, and then another full-scale test of a 2-story unreinforced masonry building at the University of Pavia in Italy. In 1995, he joined a Colorado structural engineering and construction firm, KL&A Inc., which he has led since 2003 as President and CEO. Since 2006, KL&A Inc. has been consistently voted one of the top 10 best structural engineering firms to work for in the United States, and now has over 90 structural engineers, steel detailers, and construction managers, civil engineers and land surveyors in four offices in Colorado and Wyoming. His current passion is for innovative wood structures (like the Aspen Art Museum with Shigeru Ban Architects), and in the rapidly growing field of mass timber construction, which he considers our best hope for marrying carbon sequestration with environmental responsibility.

Ron Klemencic, PE, SE, Hon. AIA, NAC, NAE



Ron, Chairman and C.E.O. of MKA, is known for his creative yet practical design solutions. A past 5-year Chairman of the Council on Tall Buildings and Urban Habitat, Ron's focus is complex high-rise and mixed-use designs. He has worked on projects in 29 states and 25 countries, with developments up to 8.4-million square feet, and is sought out by developers, architects, and contractors for his creativity, "big picture" approach, and unique ability to consistently produce cost-effective, innovative designs. Ron continues to lead the advancement of performance-based seismic design of tall buildings through initiatives including as the PEER TBI Guidelines and design of buildings, such as the 1,070-foot-tall Salesforce Tower in San Francisco and Rainier Square Tower in Seattle.

REGISTRATION INFORMATION

REGISTER EARLY TO RECEIVE THE DISCOUNT

Early Registration and Payment Deadline: Friday, September 24th

Members: \$125.00 Non-Members: \$165.00 Students: \$30.00

Group Discount for in-person attendance only: 5-9 people... 10%; 10+ people ...20%

Regular Registration Fee Online/ Payment at the Door

Members: \$150.00 Non-Members: \$190.00 Students: \$40.00

Members & Non-members & Students RSVP Online at:

<http://seacolorado.org/event/seac-fall-seminar/>

Online payment closes on Monday, October 4th

PAYING BY CHECK – SEMINAR REGISTRATION FORM

Make your check payable to: SEAC

Mail to the address listed below along with this Registration Form:

SEAC, PO Box 441069, Aurora, CO 80044

Please list all attendee names and contact information. Clarify if PDH certificate is needed.

Company Name	Attendee Names (Last Name, First Name)	SEAC member (Y/N)	Fee Amount	PDH Certificate
TOTAL FEE				

Free Parking is available next to the hotel
RTD Station is nearby (easy walk)

WEBINAR – REGISTRATION INFORMATION

REGISTER EARLY TO RECEIVE THE DISCOUNT

Early Registration and Payment Deadline: Friday, September 24th

Members: \$110.00 Non-Members: \$150.00 Students: \$30.00

Regular Registration Fee Online/ Payment at the Door

Members: \$140.00 Non-Members: \$180.00 Students: \$40.00

The WEBEX unique access password for the SEAC Fall Seminar will be e-mailed to you after payment is received a day prior to the seminar.

Members & Non-members & Students RSVP Online at:

<http://seacolorado.org/event/seac-fall-seminar/>

Online payment closes on Monday, October 4th

PAYING BY CHECK – WEBINAR REGISTRATION FORM

Make your check payable to: SEAC (Reference “ Webinar” in Memo Line)

Mail to the address listed below along with this Registration Form:

SEAC, PO Box 441069, Aurora, CO 80044

Company Name	Attendee Names and E-mail	SEAC member (Y/N)	Fee Amount	PDH certificate
TOTAL FEE				



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STRUCTURAL ENGINEERING SUMMIT POSTPONED

The [NCSEA Structural Engineering Summit](#) has a long history of bringing the structural engineering community together to network, learn, and celebrate the successes of our profession. In today's challenging environment, it will be difficult for the Summit to deliver on that purpose. As a result, NCSEA will be postponing the Summit—both the live event in New York and the virtual event—to February of 2022. Specific dates for both will be released by the end of September

UPCOMING WEBINARS

September 21st [North American Standards for Cold-Formed Steel Framing](#)

September 22nd [Cold-Formed Steel Member Design Methodology](#)

September 23rd [Not All Design Topics Are Covered in a Standard](#)

September 30th [Allowable Stress Design vs. Strength Design: A Masonry Cage Fight](#)

October 7th [Do's and Don'ts in Structural Steel Design](#)

Jirsa Hedrick values passion and excitement for structural design as we provide our team with some of the most challenging building projects while working with industry-leading designers and builders.

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Qualifications:

- Master's Degree in Structural Engineering (or Architectural Engineering)
- 2-10 years of experience in commercial building design
- A passion for structural design of buildings
- A positive attitude
- Good communication skills

Preferred skills:

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Does this sound like you? If so, please forward your resume to structure@jirsaheadrick.com

Questions? Call Brenda at 303.318.6524 or email byockstick@jirsaheadrick.com

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Must be a US citizen or able to work in the US without sponsorship.

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We Want to Hear from YOU! The SEAC Board of Directors is interested in hearing your suggestions, comments, and ideas. Please feel free to contact a member of the BOD at any time.

Thank you to all of our members who continue to support SEAC!

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Structural Engineers Association of Colorado



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