



# STRUCTURAL ENGINEERS OF COLORADO NEWSLETTER

## 2020 SPRING SCHEDULE SIGN UP FOR THESE EVENTS

AT

[HTTPS://](https://seacolorado.org/)

[SEACOLORADO.ORG/](https://seacolorado.org/)

### CSU's Big Beam Load Test

#### **SEAC Members Only Event**

March 17, 2020  
Denver Federal Center  
6th Ave. and Kipling St.  
Denver, CO 80225  
2PM—4:30PM

### PE/SE Exam Bridge Review Session

March 18, 2020  
Martin/Martin  
12499 W Colfax Ave.  
Lakewood, CO 80215  
6:00pm

### SEAC Breakfast Meeting

March 19, 2020  
Lakewood Country Club  
6800 W 10th Ave.  
Lakewood, CO 80214  
7:30am-9:00am

**Out-of-area may partici-  
pate via WebEx**

### SEAC NoCo Meeting

March 19, 2020  
CTL Thompson  
400 North Link Lane  
Fort Collins, CO 80524  
7:30am-9:00am

### **Business Management Committee Meeting**

April 9, 2020  
Martin/Martin  
12499 W Colfax Ave.  
Lakewood, CO 80215  
7:30am-9:00am

## March General Meeting

March 19, 2020

Lakewood Country Club, 6800 W 10th Ave, Lakewood, CO 80214

7:30am-9:00am

**1 PDH**

### **Understanding the New Tall Wood Building Codes**

In January 2019, the International Code Council (ICC) approved a set of proposals to allow tall wood buildings as part of the 2021 International Building Code (IBC). The 2021 IBC will include three new construction types – IV-A, IV-B and IV-C – which will allow mass timber structures as tall as 18 stories. Several local State and City jurisdictions (Washington, Oregon, Denver) have adopted the new provisions in advance of the adoption of the 2021 IBC, so architects have an urgent need to educate themselves on the new building systems. The new construction types are based on the previous Heavy Timber construction type (renamed Type IV-HT) with additional fire-resistance ratings and levels of required noncombustible protection. This presentation will introduce the new code provisions and some methods of addressing the new requirements.

#### **Learning Objectives**

1. See an overview of mass timber products and systems that form the basis of the new tall wood code provisions.
2. Understand the three new tall wood construction types – IV-A, IV-B, and IV-C – in the 2021 IBC, their allowable areas, heights, and fire resistance ratings
3. Understand code compliant options for exposing mass timber in tall wood buildings
4. Review additional code provisions that affect tall wood buildings such as sprinklers, concealed spaces, protection of connections, and penetrations.

#### **Speaker**

Gregory R. Kingsley, PhD, PE, is the president and CEO of KL&A Inc., Engineers and Builders in Golden, Colorado, a firm of over 90 that includes structural engineers, civil engineers, land surveyors, steel detailers, and construction managers. He enjoys working with design architects on innovative structures, especially in wood.

**AIA Provider Number:** E249

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# PRESIDENT'S MESSAGE

Structural Engineers Association of Colorado

SEAC's membership is capable of amazing things. Not just capable, but actively achieving great things. Not only for the structural engineering community, but also for the general public. Our Structural Engineering Emergency Response (SEER) committee volunteers train and prepare to act as second responders after natural disasters. Our Education committee and Younger Member Group reach out to our communities' STEM students to provide programming promoting structural engineering to our future engineers.

This past fall, the Denver Building Department Liaison committee provided guidance to the City and County of Denver during the City's adoption process of the 2018 IBC. One item proposed by the DBDL committee led to the early adoption of tall wood structure code provisions for the 2021 IBC into Denver's Amendments to the newly adopted 2018 IBC.

With the newly adopted tall wood structures code provisions, the doors are open for more mass timber development in Denver. We are excited to be hosting tall wood structures and mass timber presentation at this month's SEAC general meeting by Dr. Greg Kingsley of KL&A.

Together we achieve amazing things. By providing services to the general public and outreach we increase the value of the structural engineering profession. The structural engineering community is capable of amazing things. Let's do more amazing things together!!



*Charles S. Mitchell*

## Welcome to our Newest Members

**Kenny Bui**  
(Student Member)  
Colorado State Univ.

**Michael Thompson**  
(Professional Member)  
Rocky Mountain Group

**Daniel Knapp**  
(Professional Member)  
Anthem Structural Engineers

**Mitchell Werden**  
(Affiliate Member)  
Albright & Assoc.

**Christopher Krauss**  
(Professional Member)  
Albright & Assoc.

# Committee News

Structural Engineers Association of Colorado

## PE/SE Exam Bridge Review Session

The SEAC Education Committee and SEAC YMG would like to invite you to the PE/SE Exam Bridge Review Session. Come join us on **Wednesday, March 18<sup>th</sup> at 6:00pm** at the Martin/Martin office in Lakewood for a review on bridge design, including a review of the AASHTO code and practice problems you may see on the exams. Free parking is available next to the office building.

Session led by Ron Pierce, PE, SE, P. Eng with Martin/Martin

Bring your AASHTO code and come prepared with questions

Estimated 1.5 hour session duration

Open to SEAC members and non-members

[We can webcast this session via Skype for remote engineers only if interested](#)

**RSVP on the SEAC website [here](#) by Tuesday, March 17th.**

If you have any questions, please contact the SEAC Education Committee at [EducationSEAC@gmail.com](mailto:EducationSEAC@gmail.com).

Martin/Martin office location: 12499 West Colfax Avenue, Lakewood, CO 80215

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## Thank you to our 2019 SEAC Scholarship Donors!

Maryann Davis

Joe Schafer

Structural Engineers Association of Colorado (SEAC)

Stan Neujahr

Bob & Eileen Hunnes

Jim Harris

# 2019 CALENDAR OF EVENTS

Structural Engineers Association of Colorado

## SEAC Calendar

## 2020

### Important Dates

<b>BOD Meetings - 7:30am at S.A. Miro</b>
Thursday January 9, 2020
Thursday February 6, 2020*
<b>Volunteer Training with Leo Baran, NCSEA - Feb. 28, 2020</b>
Thursday March 5, 2020
Thursday April 2, 2020*
Thursday May 7, 2020
Thursday June 4, 2020*
Thursday July 2, 2020
Thursday August 6, 2020*
Thursday September 3, 2020
Thursday October 1, 2020*
Thursday November 5, 2020
Thursday December 3, 2020*
* notes conference call only
<b>Business Management - 7:30am at Martin Martin</b>
Thursday February 13, 2020
Thursday April 9, 2020
Thursday June 11, 2020
Thursday August 13, 2020
Thursday October 8, 2020

### General/Annual Meetings - 7:30am

Thursday January 16, 2020 at Lakewood Country Club
Thursday March 19, 2020 at Lakewood Country Club
Thursday May 21, 2020 at Lakewood Country Club
Thursday July 16, 2020 at Lakewood Country Club
Thursday September 17, 2020 at Lakewood Country Club
<b>Fall Conference TBD</b>
<b>Annual Meeting November 5 at Space Gallery</b>
<b>SEAC Newsletter Deadlines</b>
January issue - January 3rd
March issue - February 21st
May issue - April 24th
July issue - June 26th
September issue - August 21st
November issue - October 23rd
<b>SEAC ENews Deadlines</b>
February issue - January 31st
April issue - March 27th
June issue - May 29th
August issue - July 31st
October issue - September 25th
December issue - November 27th

### January

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### October

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### November

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### December

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30	31					

## Upcoming Webinars:

### **March 10th**

#### [Masonry Movement Joints](#)

Sam Rubenzer, SE, started FORSE in 2010, where he works as a delegated designer for other structural engineers on designs involving steel, concrete, ...

### **March 24th**

#### [Lintels for Masonry Walls](#)

Sam Rubenzer, P.E., S.E., founded FORSE Consulting in 2010 and has been assisting other structural engineers on a wide variety of designs with an ...

### **April 16th**

#### [Structural Design and Embodied Carbon](#)

Nicholas Miley, S.E., is a senior engineer with KPFF Consulting Engineers in San Francisco and co-chair of the SEAONC Sustainable Design Committee. ...

### **April 29th**

#### [CalOES Safety Assessment Program](#)

# OTHER EVENTS OF INTEREST

Structural Engineers Association of Colorado



## Volunteers Needed

**The Rocky Mountain Regional Event will be held at Colorado School of Mines Friday 4/3/2020.**

Many of AISC's initiatives have been built on the help of our volunteers, and the Student Steel Bridge Competition is no exception. Volunteers are critical to the success of each Competition event. For professionals looking to give back and contribute to the future of their field, this is an easy yet important way to make a big impact on students and the experience they carry forward into their careers.

The number of volunteers needed at each event varies. Some schools may have a well-established network of those they can continually count on while others may be looking to find as many new volunteers as possible.

Please consider volunteering at one or more SSBC events. No engineering background or competition experience is required, but volunteers should conduct themselves professionally and responsibly. Possible volunteer positions include:

### Judges

Under the supervision and instruction of the Head Judge, judges conduct the events of the competition. They interpret and enforce the rules, score the bridges, and monitor safety concerns. Judges should be able to walk around for the duration of the competition. They are expected to perform assigned tasks with care and accuracy and to be fair in all decisions. Tasks may include taking measurements, operating a stopwatch, and recording scores. Judges should make themselves familiar with this year's Rules of the competition.

### Bridge Marshal

A Bridge Marshal will be assigned to each competing team. The Bridge Marshal will accompany the team for their entire time on the competition floor. He/she will hold the official scoring document for the team and give this to the various judges to mark at each station and finally at the scoring table at the end.

### Other

Hosts may need additional volunteers to assist with other tasks throughout the competition such as competition space set up and clean up, and more.

Please see:

<https://www.aisc.org/education/university-programs/student-steel-bridge-competition> for more information.

The Volunteer Interest Form is available at: <https://www.iotform.com/form/92663736648168>

*Please note: Completing the SSBC volunteer interest form does not guarantee that the SSBC Host School will contact you regarding a volunteer position. AISC will pass along contact information to the host, and they will contact as many people as they need.*

# OTHER EVENTS OF INTEREST

Structural Engineers Association of Colorado

 University of Colorado **Boulder**

## Post-Disaster Safety Evaluation of Buildings & Infrastructure

ATC-20, ATC-45, and Cal OES SAP Training

**Sunday  
5 Apr 2020**

8 AM - 5 PM



### Training session

Colorado experiences earthquakes, floods, tornadoes, and other natural disasters that damage infrastructure and threaten people's safety. The 2013 Colorado floods damaged or destroyed 20,000 homes and 50 highway bridges. Colorado has experienced 7 damaging earthquakes since 1944 with magnitudes of 5.2 to 5.5, and in 1882 experienced a magnitude-6.6 earthquake near Estes Park. Damage from such events can overburden building safety officials and lifeline operators. Colorado is training a corps of volunteers to rapidly assess the safety of buildings and critical infrastructure, speed recovery, and help people quickly and safely return to their homes, offices, and public spaces. The training uses the de facto international standards for post-disaster safety evaluation procedures called Post-Earthquake, Windstorm and Flood Safety Evaluation of Buildings (ATC-20 and ATC-45).

The University of Colorado Boulder is providing training on ATC-20 and ATC-45 to prepare you to assess building and lifeline safety following a disaster. Taught by a University of Colorado structural engineer and certified California Office of Emergency Services Safety Assessment Program (Cal OES SAP) trainer with experience in U.S. and international disasters, you will learn basic engineering principles and standard procedures for post-disaster safety evaluation. You will participate in exercises using real-life examples of earthquake, hurricane, and flood damage from U.S. and abroad.

### Training topics

- ATC-20/45 building safety evaluation procedures.
- Cal OES SAP certification for qualified professionals. Attendance is open to all but certification is limited to licensed engineers, architects, engineering geologists, building inspectors, and public-works inspectors; list at <https://goo.gl/H2HahX>.
- Training examples of damaged buildings from disasters in the U.S. and abroad.
- How do buildings and other infrastructure structurally react to extreme loads?
- Procedures and exercises for wood, masonry, concrete, and steel buildings.
- GREEN, YELLOW, and RED placards, what are they and how do we use them?
- When and how do you perform a safety assessment and post a building?

### Training logistics

WHERE: Engineering Center ECCE room 1B41, Boulder CO; see map on reverse  
COST & CLASS SIZE: \$20 covers coffee, bagels, and donation to ASCE and EERI student chapters. Manuals provided free by FEMA. Limited to 50 people. Course provides documentation for continuing education units (0.8 CEUs).

TO REGISTER: visit <https://sap-cu-apr2020.eventbrite.com>

# OTHER EVENTS OF INTEREST

Structural Engineers Association of Colorado



## Instructor

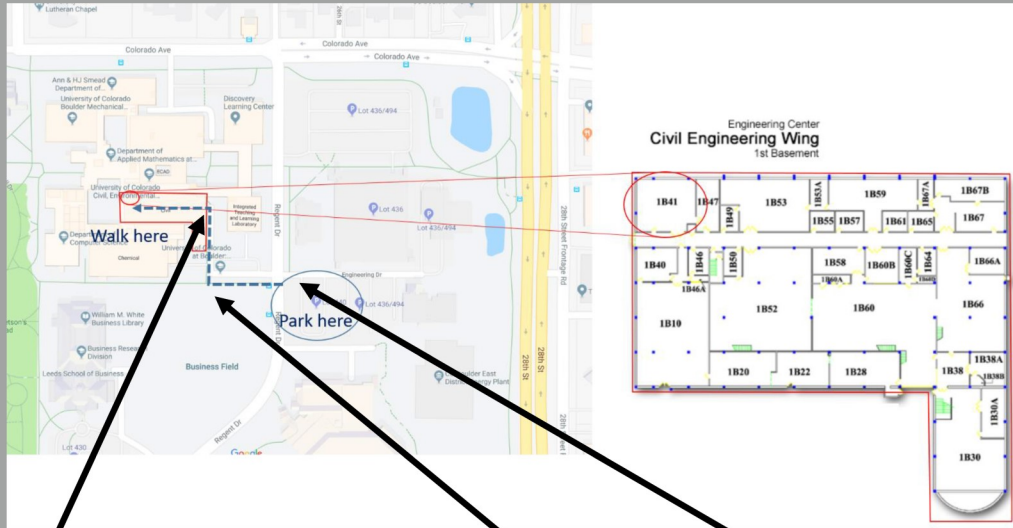
Keith Porter, P.E., PhD., M.ASCE



Dr. Porter is a licensed California professional engineer, a research professor at the University of Colorado Boulder, and principal of the consulting company SPA Risk LLC. He has 30 years of experience in structural engineering practice and university research addressing natural disasters. He leads the new *Natural Hazard Mitigation Saves* study for the National Institute of Building Sciences, updating the groundbreaking, Congressionally-mandated 2005 benefit-cost analysis of natural hazard mitigation for 3 federal agencies and 4 private-sector sponsors. He helped to lead the US Geological Survey's ShakeOut, ARkStorm, Tsunami, and HayWired disaster planning scenarios. He has performed post-disaster reconnaissance and data collection after several natural disasters in the U.S. and abroad. He is a certified Cal OES SAP trainer and holds engineering degrees from UC Davis, UC Berkeley, and Stanford University.

## Directions to classroom ECCE 1B41

Park in paid lot 440, <https://goo.gl/maps/8p99Nmsjq1S2>. Follow the dashed lines on the map below to ECCE 1B41. If walking from elsewhere on campus, point Google Maps here: <https://goo.gl/maps/C7ewhWcRrS72>.



# OTHER EVENTS OF INTEREST

Structural Engineers Association of Colorado

## 2020 RMSCA SPORTING CLAY TOURNAMENT



**Kiowa Creek Shooting Club**  
46700 East County Road 30  
Bennett, CO 80102

**Friday, May 8th, 2020**  
8:00 a.m. Registration  
9:00 am Shotgun Start

Proceeds from the 2020 Clay Shoot Event will help support:  
Multiple AISC Scholarships; Stipend for supporting university professors to attend the NASCC; College Students AISC Steel Bridge Competition and more!!

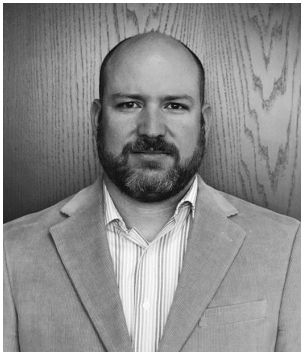
Sponsorships	Registration**
Includes signage and promotion at event:	All Registrations includes:
Tournament Sponsor \$3,500 Includes TWO Teams (One Available)	Breakfast 100 - 12 or 20 Gauge Shells Parting Gift
Gift Sponsor \$2,500 Includes ONE TEAM (Two Available)	Foursome Registration \$800
Shotgun Sponsor \$2,250 Includes ONE TEAM (Two Available)	Twosome Registration \$450
Ammo Sponsor \$2,000 Includes ONE TEAM (Two Available)	Single Registration \$300
Food Sponsor \$1,250 Includes ONE TEAM (Four Available)	
Beverage Sponsor \$1,200 Includes ONE TEAM (One Available)	
Safety Sponsor \$1,200 Includes ONE TEAM (One Available)	**See RMSCA Yearly Registration for other options.
Station Sponsor \$500 (Ten Available)	

Please go to <http://rmsca.org> to sign up for the Clay Tournament.

**[www.RMSCA.ORG](http://www.RMSCA.ORG)**

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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!**

# NEWSLETTER ADS

Structural Engineers Association of Colorado



## YOUR ADVERTISEMENT HERE

Consider placing an ad in the bi-monthly SEAC newsletter to reach over 300 members, including professional engineers, suppliers, and vendors.

Contact Kim Wyatt at [administrator@seacolorado.org](mailto:administrator@seacolorado.org) or go online to <https://seacolorado.org/seac-shop/>.

Full Page Employment Ad: \$250  
Half Page Employment Ad: \$150  
Quarter Page Employment Ad: \$100

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