

STRUCTURAL ENGINEERS OF COLORADO

NEWSLETTER

JOINT MARCH SEAC/CAGE GENERAL MEETING

2017 SCHEDULE

March 16, 2017

Colorado Fault Sources, Seismicity and Related Issues

Meetings

Renaissance Hotel 3801 Quebec St. Denver, CO March 16 May 18 July 20 September 21

Annual Meeting: November 9, 2017

140 Verriber 3, 2017

Fall Seminar:

October 19, 2017

Board of Directors:

Martin/Martin, Inc. 12499 W. Colfax Ave. Lakewood, CO 80215 Time: 7:30am April 5 June 1 August 3 October 5

Web-Based Board Meetings

March 2 May 4 July 6 September 7 November 2

Business Management Committee

Martin/Martin, Inc. 12499 W. Colfax Ave. Lakewood, CO 80215 April 13 June 8 August 10 October 12

RSVP March 2017 MEETING

March 16, 2017 Breakfast at 7:30 a.m. Renaissance Hotel 3801 Quebec Street, Denver, CO 80207

RSVP by 5pm
Tuesday, March 14
on the SEAC website

The topic of the March SEAC meeting will be "Colorado fault sources, seismicity and related issues." Robin McGuire, Mark Zellman, and Rob Jackson will discuss the geologic and seismological characteristics of Colorado faults and the uncertainties inherent in their evaluation. Structural engineering for seismic resistance in low to moderate seismic regions such as Colorado may warrant some engineering judgment beyond basic compliance with the building code provisions. Earthquakes in Colorado are sometimes triggered by deep injection of fluids into the bedrock. The hazard maps do not comprehensively address this seismicity. Structural damage from moderate earthquakes and some possible code improvements will also be discussed.

March Meeting Speaker Bios:

Robert C. Jackson, PE, SECB: is a structural engineer at AECOM, the Chair of the SEAC Seismic Committee and a Director on the SEAC Board. He is the Co-Chair of the Colorado Earthquake Hazard Mitigation Council and an advocate for the seismic safety of schools. Rob is the Chair of the Code Update and Improvements Subcommittee of the Earthquake Engineering Research Institute (EERI) School Earthquake Safety Initiative. He is a life member of ASCE and has served on the ASCE 41 Committee. Rob is a CU Boulder graduate and holds a Master's Degree in Civil Engineering from the University of Colorado at Denver. Rob is a registered Professional Engineer in Colorado, California and Wyoming.

Robin K. McGuire, Ph.D., PE: served as President of Risk Engineering from its founding in 1984. He is currently Senior Principal at Lettis Consultants International, Inc. Dr. McGuire has long been recognized as an international leader in the practice of seismic hazard evaluation and risk analysis. He is the author of the industry standard Seismic Hazard and Risk Analysis, an EERI monograph. He has been the technical director of major projects to estimate engineering design levels and damage to engineered facilities subjected to natural forces induced by earthquakes, hurricanes, and tornados. He has authored or co-authored more than 100 technical papers and articles and several regulatory documents. Dr. McGuire was selected by the Seismological Society of America (SSA) to present the 2009 William B. Joyner Memorial Lecture, and was elected in 2007 to the National Academy of Engineering. He is a former President and Board Director of SSA. He holds degrees in civil and structural engineering from MIT and Cal Berkeley.

Mark Zellman, PG, GISP: is a Senior Geologist at Fugro Consultants in Lakewood. He graduated from Indiana University of Pennsylvania with a B.S. degree in Environmental Geoscience in 1999 and with an M.Sc. degree in GIS and Remote Sensing from the University of Pittsburgh in 2002. He is a licensed Professional Geologist and Geographic Information Systems Professional. His early career included environmental remediation and geotechnical work for D'Appolonia Ground Technologies and Shaw Environmental. In 2005 he joined William Lettis and Associates, which was later purchased by Fugro. At WLA/Fugro his primary field of practice has been in applying integrated analysis techniques to projects involving geologic hazard assessment, and geologic and geotechnical site analysis and characterization. He has a particular interest in seismic hazard characterization and the study of active faults.

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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!

PRESIDENT'S MESSAGE

Structural Engineers Association of Colorado

hope you attended the January General Meeting. We had an impressive presentation from our committee chairs about their activities. I learned much about SEAC and I hope you did too. There are many opportunities to get involved in your profession through the 18 SEAC committees. The goal of the presentation was to inform you of these opportunities and spark an interest in checking them out. I hope you participate in one of these committees. It's true that you will get more out of SEAC if you are involved with a committee. The slides have been posted to our website https://seacolorado.org/wp-content/uploads/2016/02/SEAC Jan 2017 General Meeting Compressed.pdf. Check it out if you missed the January meeting.

Our March meeting is the annual joint meeting with CAGE, the Colorado Association of Geotechnical Engineers, where we have a presentation of mutual interest. This year this presentation is on the seismicity in Colorado. Many lay people, and some in our industry, don't understand the importance that seismic design has on our built environment. It is a factor in most projects and controls over wind for many buildings in Colorado. Come learn about Colorado's seismicity both historical and recent. There will also be a discussion about Seismic Design Category A and why some believe it is not appropriate for Colorado.

As I mentioned at the January meeting, the SEAC board is focused this year on improving the website and finding a replacement for Caryn. We're making progress on both issues. The website problems, although continuing, are reduced in number. Over 100 of you have not renewed your membership for 2017, and we've heard from many that the website didn't work when you tried to renew. All the earlier website issues have been addressed, so please try again to renew thru the website. Many members have not had a problem with this, but if you do please let us know by e-mailing seac@martinmartin.com.

Finding a new Executive Assistant to replace Caryn has been a challenging task in that she does so much for the organization. We have created a Job Description and we will begin advertising soon. Please contact a board member if you know of someone that may be interested.

Finally, I'd like to encourage you to attend the SEI national conference in Denver in early April. This is a rare opportunity to participate in an outstanding national conference without leaving our state. See http://www.asce.org/structural-engineering/structural-engineering-institute for more information. Advanced registration ends on March 16. I hope to see you there.

Thank you,

Tem BA



The SEAC Education Committee would like to invite you to the SEAC New Programming Series **1**st **Project Presentation** sponsored by SEAC and the NCSEA Grant

PRESENTER: Julian Lineham, PE, SECB, CEng, MICE/Studio NYL

TOPIC: "Utilizing Parametric Techniques to Optimize Workflow"

WHEN: Tuesday, April 25th @ 5:30 pm; 1.5PDH

LOCATION: TBD; will be announced soon

Registration on the SEAC website will open after SEAC March General Breakfast Meeting.

Learning objectives:

The presentation introduces some methods of parametric workflows that enable efficient structural design of geometrically complicated structures.

These include geometry variations primarily. The presentation uses case studies for various projects to demonstrate these parametric techniques.











Julian Lineham, PE, SECB, CEng, MICE

Julian Lineham, one of the two Founding Principals of Studio NYL Structural Engineers and Façade Designers, may be trained as a structural engineer, but it is his passion for architecture that guides the highly inventive structural solutions he creates for clients around the world.

Julian received his civil engineering degree from the prestigious University of Bristol, England in 1986. He began his career in London, England, with YRM Anthony Hunt and Associates. After spending a decade in London working with some of England's leading structural engineering firms, Julian moved to Boulder, Colorado with his young family in 1997. Julian was awarded his PE in 1999. Julian and his business partner Chris O'Hara launched Studio NYL in 2004 after working together in Boulder since 2001. Studio NYL's goal was to more actively explore challenging architectural solutions, offer more diverse design possibilities, and help architects see that engineering can indeed inspire architectural expression.

Julian chaired the Structural Engineers Association of Colorado (SEAC)/American Institute of Architects (AIA) Architectural Liaison Committee from 2001 to 2006. He is the National Marketing Chair for SECB. Julian is also the Western USA Representative for the Institution of Civil Engineers (London, UK), representing 13 western states. He has also been a frequent guest lecturer at the University of Colorado at Denver and Boulder, and has presented at numerous regional and national AIA

conferences and AIA 10x10 lectures, as well as at ABX in Boston. In addition to his PE in the United States, Julian also holds a Chartered Engineering license in the United Kingdom.

As fully engaged holistic structural engineers, Studio NYL's architectural clients often turn to Julian and Chris for proactive architectural solutions. Studio NYL has Regional, National and International clients and projects, including recently a 60,000 seat FIFA Soccer Stadium in Dubai, UAE, the new NFL RAMS Stadium's metal panel roof in Inglewood, California and Tottenham Hotspur's Stadium pitch-side glazing in London, UK.

EMPLOYMENT OPPORTUNITIES



Structural Engineers Association of Colorado

Structural Engineering Designer II Wanted!

Quality Engineering is seeking an ambitious, dedicated individual to serve in a Structural Engineering Designer II role.

Quality Engineering specializes in Civil & Structural Engineering and consulting within both the public sector and private industries. Our **vision** is to be the go-to company for our clients who want a high-quality engineering partner for their projects throughout the Front Range Corridor and surrounding states. We also strive to be the employer of choice for passionate, hard-working team members. Our **mission** is to provide creative and efficient designs for our clients through high-quality client service, technical and professional excellence, and current technology. Training and personal development, industry/technical specialization, sustainable growth, and career advancement are crucial to our mission and strategy.

QUALIFICATIONS:

EI certification required, PE within 12 months preferred.

3-6 years of structural engineering experience.

Experience preferred in building and bridge design including steel, masonry, concrete, and timber structures; code and software.

Residential design experience a plus but not required.

Proficiency or training with both AutoCAD and Revit structure required.

Must be knowledgeable in building and material codes, sample projects desired.

Must be able to work in a highly team-oriented environment and be conscientious and detail oriented.

Must be able to review junior staffs' work.

OUR VALUES:

Integrity, Communication, Responsiveness, Creativity, Ingenuity, Teamwork, Education, Community, Charity, Excellence, Character, Listening, Relationship, Mentoring

Does this Sound like you? If so, please send a cover letter and resume to admin@quality-engineering.com

Questions? Call Cody at (970) 416-7891 or email cody@quality-engineering.com

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EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado



Tech for WebEx Broadcasting:

SEAC is looking for a 2nd qualified person to support the organization as a backup WebEx broadcasting technician. This person would step-in and run the broadcast if the first technician is unable. The job activities could include:

- Coordinating with the hotels A/V personnel on equipment and services that SEAC has contracted for.
- Setting up SEAC equipment, running and monitoring the WebEx broadcast throughout the event, trouble shooting and breaking down the equipment at the conclusion.
- Time commitment could be from 6:30 to 9:30 am for any of the five general meetings per year, or from 6:00 am to 1:00 pm for the annual fall seminar.

If the backup person takes responsible charge of the broadcast the compensation will be \$250 for a full general meeting, and \$500 for a full fall seminar. Partial backup periods will receive partial compensation.

If you are interested, or if you know someone who might be, please contact Caryn, Katharine, or any Board member for further details.

Structural Engineers Association of Colorado

2017 MOUNTAIN STATES TOP YOUNG PROFESSIONAL

Growing up, Jeannette Torrents was a wunderkind who has carried her young prowess into her professional career. A Langsdorf Fellow and valedictorian of her class in the School of Engineering at Washington University in St. Louis, Torrents won a National Science Foundation (NSF) fellowship while earning her master's degree in civil engineering from the University of Colorado.

Through her NSF fellowship, Torrents developed and taught a hands-on engineering curriculum to students in local public middle schools. She also taught a summer engineering course for Upward Bound, a college prep program for disadvantaged students.

She rose through the ranks at JVA Inc., where she now sits on the company's board of directors. A licensed engineer in eight U.S. states and territories, Torrents has experience in high-seismic regions, post-tensioned and reinforced concrete, structural steel, conventional and engineered wood framing, masonry and light-gage steel construction.

Congratulations

Jeannette Torrents!

Her recent projects include a new elementary school in Boulder, a major addition and renovation to Quigley Hall at Western State University in Gunnison, Colo., and a new office building in downtown Boulder.

We would like to recognize a few company's for their amazing contributions and support!

The SEAC Scholarship Fund Inc. would like to recognize AKM Engineering Consultants, Inc.'s, JVA, Inc.'s, Monroe & Newell Engineers, Inc.'s, J.R Harris & Co. and Stan and Debbie Neujahr's recent contributions to the SEAC Scholarship Fund. These contributions help support university students studying structural engineering who intend to practice in Colorado upon graduation. The 2017 scholarship application period is now open. Applications and pledge forms can be downloaded from https://seacolorado.org/scholarship/ or requested from SEACscholarship@jvajva.com.

Structural Engineers Association of Colorado



Denver, Colorado | April 6-8





e invite you to attend Structures Congress 2017. Join 1,200 of your peers from the US and abroad for three days of networking and technical sessions at the Colorado Convention Center in Denver, CO, April 6–8, 2017.

Thursday begins with an exciting Opening Program where Greg MacGillivray, director of *Dream Big*, the new IMAX movie on engineering, will share with us behind-the-scene moments from filming, including flying over the Shanghai Tower. The Plenary Luncheons on Friday and Saturday will feature extraordinary keynote speakers Guillermo "Bill" Vidal, P.E., 44th Mayor of Denver, engineer, author, consultant, Past President and CEO of the Hispanic Chamber of Commerce of Metro Denver; and Charles H. Thornton, Ph.D., P.E., Hon.M.ASCE, consultant and Founding Principal of Thornton Tomasetti (see page 2).

Choose from 120 sessions during this year's technical program. Hear from the experts that developed ASCE 7-16 and other standards, learn about buildings, bridges, blast, natural disasters, materials, business practices, and much more. Learn about new tools and technology, and connect with vendors in the bustling Exhibit Hall that will include vendor demonstrations and a new Student Competition. This year's program also includes a Career Networking Event for students and employers. Earn PDHs, enjoy tours, and exciting social events. You will not want to miss the Friday Special Reception Celebrating the Future of SE hosted by CSI. Make sure you purchase this additional ticket.

Plan now to join us – and bring your colleagues – to Structures Congress 2017 in Denver to take advantage of all SEI/ASCE offers to equip and inspire you to lead and innovate in structural engineering.

We look forward to seeing you in Denver!

JOIN US TO:

- Learn from the experts
- Experience the new Student Competition
- Check out the 2017 Report Card for America's Infrastructure and ASCE 7 online
- Celebrate at the Friday Special Evening Reception hosted by CSI

.... And much more

Structural Engineers Association of Colorado



EARTH • ENERGY • ENVIRONMENT Department of Civil and Environmental Engineering

30th Annual ASCE National Concrete Canoe Competition

June 17 - 19, 2017 - Colorado School of Mines - Golden, Colorado

(http://www.asce.org/event/2017/concrete-canoe/)

The Colorado School of Mines is very proud to announce that the 2017 National Concrete Canoe Competition will be held right here on our beautiful campus this summer, June 17 - 19, 2017. We are expecting to host approximately 450 people, comprised of 25 regional champion teams representing schools from across the nation, and their supporters. Alumni of the Concrete Canoe Competition can appreciate what a truly fun, exciting, and memorable event this is and the entire Mines community wants to make the 30th Annual National Concrete Canoe Competition the most memorable event yet.

This wonderful three-day event begins with a full day of student competitors displaying their masterfully crafted concrete canoes on Stratton Commons. Day two, the teams take the stage for tightly scripted presentations about their canoe, project management, and innovative construction techniques. Day three, the culmination of the event, is race day. We are planning to convene at Evergreen Lake, a wonderful venue to showcase our picturesque Colorado summer. The Awards Banquet where the champion is crowned will take place that evening. Attendees will be treated to the best Mines has to offer including lodging and catering. It's a big undertaking for our ASCE student chapter so, to be sure the event is a success, please consider helping with the many costs associated with hosting an event of this magnitude.

We welcome your involvement and attendance and we look forward to seeing you there. You can help ensure the success of the event by contributing directly to the CSM-ASCE Student Chapter. You can donate directly to the CSM-ASCE Student Chapter by sending you contribution to the CSM – ASCE Student Chapter, c/o Jeffrey Holley, PE, Faculty Advisor, jholley@mines.edu.

As an alternative to a general donation, you might also consider a direct donation towards a specific part of the competition, such as meal sponsorship or competition equipment like the floatation tank for buoyancy testing or the weight station. There are a number of ways your organization can support this event. Please feel free to inquire for additional information and details regarding sponsor benefits.

We are really looking forward to hosting this event and showcasing the best of Colorado and the School of Mines. If you have time, please come out and see these incredible canoes. Thank you for your time and consideration in helping make this event a wonderful and fulfilling experience for everyone.

1500 Illinois Street, Golden CO 80401

MINES.EDU

Structural Engineers Association of Colorado

Welcome to our Newest Members



Matthew Hardman

(Professional Member)
Thornton Tomassetti

Aaron Wetherbee (Affiliate Member)
Jira Hedrick Structural Engineers

Eric Richards (Professional Member)
Larsen Structural Design

Max Loeb (Affiliate Member)
Professional Engineering Consultants

Craig Biere (Professional Member)
Albright & Associates

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Do you know someone that would be interested in sponsoring a SEAC Meeting?

Please contact:

Ben Cook, Past-President, 303.914.4300 -BCook@wje.com

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

To learn more, contact Katharine Sparhawk (SEACNEWS@MartinMartin.com)

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BUILDING TRUST

EDUCATION COMMITTEE

Structural Engineers Association of Colorado

SEAC EC PE/SE SUBCOMMITTEE

1) PE/SE Kick-off Meeting

For the 3rd year, the SEAC EC PE/SE Subcommittee held the PE/SE Kick-off meeting on January 24th.

During this kick off meeting, the PE/SE participants were introduced to the various PE/SE webinar options and were encouraged to create study groups.

Four of the participants selected the Brightwood PE or SE Webinar, which allowed them to obtain the 54% webinar group price discount. One of the participants selected the ASCE/ YMG PE Webinar review.



2) The PE/SE Bridge Review session

Planning is under development. Mr. Darin Freeman P.E., Bridge Group Lead at HDR, will lead this session on Wednesday, April 5th at 6:00pm at the HDR office (1670 Broadway, Suite #3400).

Please RSVP by Friday, March 31st so we can provide an accurate attendees list at the building security desk. Parking and the building access instructions will be e-mailed to you.

This 1.5hr session will provide an overview of the AASHTO code to cover the lack of experience of SEAC Members since we mainly design buildings and various structures.



SEAC EC NEW PROGRAMMING SUBCOMMITTEE

Plant Tours or Job Site Tours (June or September 2017)

We are looking for volunteers!

Interested in hosting a tour or giving a presentation?

Contact us at educationSEAC@gmail.com



SEAC COMMITTEES... We Need You!

Structural Engineers Association of Colorado

Have you considered joining a committee?

Your participation is what makes our organization so successful.

If you are interested in joining, please click on the hyperlinked name to contact

Committee	Chairperson	Contact Phone	Board Liaison
ВІМ	Desirée Mackey	303.431.6100	Jeremy Crandall
Building Dept. Liason	DORMANT		Rob Jackson
Business Management	Paul Hause	303.399.5154	Paul Doak
Construction Industry			Paul Doak
Denver Building Dept.	Jerry Maly	303.914.4300	Rob Jackson
Education	Irena Kahanek Chad Mitchell	720.296.7595 720.407.1031	Jeannette Torrents
Ethics	Peter Marxhausen	303.947.5375	Donald Harvey
Membership	Jerry Maly	303.914.4300	Ben Cook
Nominating	Jerry Maly	303.914.4300	Paul Doak
Northern Colorado	Greg Black	970.619.8986	Greg Black
Precast Concrete	Trevor Kirkley Graham Allen	303.298.1900	Paul Doak
SEER	Brent Norris Mike Piper	303.860.9021 303.431.6100	Rob Jackson
Scholarship	Jeannette Torrents	303.444.1951	Jeannette Torrents
Seismic Standards	Rob Jackson	303.843.2850	Rob Jackson
Snow Loads	Jeannette Torrents	303.444.1951	Jeannette Torrents
Standard of Practice	Jim Ness	303.623.4927	Paul Doak
Steel Materials	Ben Cook	303.914.4300	Ben Cook
Wind Loads	Jeannette Torrents	303.444.1951	Jeannette Torrents
Young Engineers	Jeremy Crandall Katie Courtright	303.399.5154 303.399.5154	Jeremy Crandall
Existing Structures	Gene Stevens	303.860.9021	Donald Harvey

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