



STRUCTURAL ENGINEERS OF COLORADO

NEWSLETTER

MAY GENERAL MEETING

2015 SCHEDULE

Meetings

Loc: Renaissance Hotel
Time: Breakfast 7:30 a.m.
January 22
March 19
May 28 (4th Thursday, Sheraton Denver West)
July 16
September 17

Fall Seminar

Loc: Sheraton Denver West
Time TBD
October 9

Annual Banquet

Details TBD

Board of Directors

Structural Consultants, Inc.
Time: 7:30 a.m.
January 8
February 5
April 2
June 4
August 6
October 1

Business Management Committee

Loc: Renaissance Hotel
Time: Breakfast 7:30 a.m.
February 12
April 9
June 11
August 13
October 8

SNOW LOADS

The Structural Engineers Association of Colorado (SEAC) Snow Load Committee has developed new ground snow loads to be used for structural design in Colorado. Philosophically, these loads represent a transition from a uniform hazard approach to a uniform risk approach for determining design snow loads. Previous studies, including the 2007 SEAC report, determined design ground snow loads based on a uniform hazard, *i.e.*, the design value at a site is taken as the 50-year snow load (the load with a two percent annual probability of exceedance). However, due to the large variations in climate throughout Colorado, new studies conducted by this committee have shown that using the 50-year load as the basis for design does not provide uniform protection against the risk of roof failure. At plains sites in particular, roof design based on the 50-year ground snow load may not achieve the reliability levels targeted by national (ASCE-7) standards, meaning that the probability of failure may be higher than expected. The converse is true in mountainous regions, where the reliability achieved when the 50-year load is used in design may actually be greater than required by ASCE-7. These patterns stem from differences in snowfall and accumulation throughout the state. In the mountains, snow builds up over the course of the winter, producing large ground loads, but many of those sites exhibit fairly low variability in the loads from year to year. Snow loads in the plains tend to be dependent on large single-storm events and are highly variable from year to year.

MAY 2015 MEETING

Thursday, May 28, 2015

Sheraton Denver West

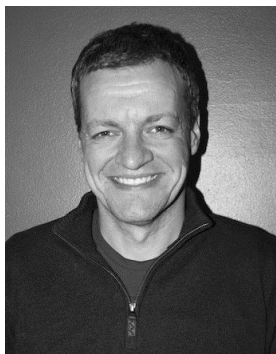
Breakfast at 7:30 a.m.

360 Union Boulevard
Lakewood, Colorado 80228

RSVP by *Monday, May 25*, on the [SEAC website](#).

BOARD OF DIRECTORS

Structural Engineers Association of Colorado



Don Carroll

President

J.R. Harris & Company

303-860-9021

don.carroll@jrharrisandco.com



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VP/Treasurer

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Susan Jorgensen

Director

303-919-9321

susiejorg315@comcast.net

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

Winter is leaving us for another year. The snow may fly another time or two, but spring is here. The color green is arriving to the landscape and with it warmer weather. The kind of weather that sometimes makes you think about extending that site visit just a little bit longer to enjoy the sunshine. We would never do that, of course, too dedicated to our craft and all that...but it can be so very tempting. I know many of us are quite busy, but I urge you to take an hour and just sit outside on a warm sunny day. It can do wonders for the soul.

As a tip of the hat to winter on its departure, the topic for the May general meeting is snow. The SEAC Snow Load Committee has been hard at work revising the snow load map for our state and will present the fruits of their labor. The new ground snow load values are based on statistical terms like Reliability, Gaussian, and the impressive sounding Monte Carlo Analysis. (I didn't even make that last one up.) A draft of the Committee's work will be distributed for review of the membership prior to the General Meeting in a separate email. At the conclusion of the meeting, there will be a vote of the membership on whether or not SEAC will endorse the new snow load map.

SEAC has experienced continued growth over the years, and this growth has placed ever-increasing burdens on Caryn, SEAC's Executive Assistant. Wiss, Janney, Elstner Associates had been gracious enough to provide some help in this respect. Gisela Schmidt with WJE will be taking on some tasks, such as compiling the newsletter and handling publication requests. Gisela's help will allow SEAC to continue providing its members the level of service they have come to expect. Please continue to use the traditional email address, SEAC@martinmartin.com, to contact SEAC.

Note that due to scheduling conflicts with the Renaissance Hotel, **May's General Meeting will be May 28 (4th Thursday, not the typical 3rd) at the Sheraton West** (site of recent fall seminars). Some folks expressed their desire to keep their old nametags instead of the new sticky tags we used for the March meeting. Given the location of May's meeting, the 'crate' will not be available, but it will be at July's meeting where your old nametag can be picked up.

Attached to this newsletter is the proposed budget for 2015.

Cheers,



Don Carroll, SEAC President

EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado



APEX Engineers Inc. is actively seeking a creative, highly talented Structural Engineer for immediate employment in our Denver Metro Office. Our ideal candidate is highly motivated, exudes a strong work ethic and problem solving skills. They shall be proactive, highly organized, possess excellent written and verbal communication skills

and aspires to be client-service oriented. The incumbent can look forward to a variety of project types, including: commercial, industrial, multi-family, & high-end residential.

Qualifications

- 2+ years' post-bachelor's degree working as a structural or architectural engineer
- Bachelor's degree in civil/structural or architectural engineering from an accredited institution
- Licensed as E.I.T. or P.E. in at least one US state
- Prior experience in construction is a plus

Desired Technical Skills, Abilities and Knowledge

- Revit and AutoCAD
- RISA 2D/3D, Enercalc, Microsoft Office and Excel
- Understanding of the International Residential Code (IRC) and International Building Code (IBC).
- Experience in design with structural steel, concrete, masonry, wood, wind and seismic design.

Key Areas of Responsibility

The key areas of responsibility of this position include, but are not limited to:

- Applies knowledge of engineering principles to prescribed techniques and procedures to complete project assignments.
- Provide structural engineering analysis, design and specifications for buildings and structures using concrete, steel, masonry, and wood
- Coordinate design with other team members
- Applies building code design criteria and completes structural analysis, design calculations and markups, etc.
- Work alone or in collaboration with other design team members to prepare construction documents or other materials to meet project requirements
- Communication with Project Manager and other team members about workload and any changes in project schedule, scope or additional services
- Complete construction administration duties such as the review of shop drawings, handling contractor questions, and field work

About Apex Engineers

Apex Engineers is a privately owned, regional structural engineering firm which offers complete structural design services in more than 20 states across the country. Headquartered in Kansas City, Missouri, with branch offices in Denver, Colorado, and Lawrence, Kansas, Apex prides itself on being innovative and thinking outside of the box, resulting in lasting client relationships.

More information on APEX and its services can be found at <http://www.apex-engineers.com>.

Interested parties can email a resume and cover letter to: careers@apex-engineers.com.

EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado



Failure Analysis Associates®

Managing Engineer, Geotechnical Engineering

Exponent is a leading engineering and scientific consulting firm. Our multidisciplinary team of scientists, engineers, physicians, and regulatory consultants brings together more than 90 different disciplines to solve complicated problems facing corporations, insurers, government entities, associations and individuals. Our approximately 900 staff members work in 26 offices across the United States and abroad. Exponent has over 700 consultants, including more than 425 that have earned a doctorate in their chosen field of specialization.

Exponent's [Civil Engineering](#) Practice has over 30 years' experience investigating all types of structural, geotechnical, geological, geomechanical, construction, and building problems, from major catastrophes to simple performance failures. Exponent's Geotechnical Engineering, Geologic Engineering and Engineering Geology (GEO) staff provide unusually broad expertise to address a host of projects, including dams, levees, natural or fill slopes, buildings, braced excavations, pipelines, retaining walls, highway embankments, and other earthwork construction. Our engagements typically involve mitigating natural hazards, solving unique design problems, evaluating the merits of entitlement or differing site conditions for construction claims, evaluating the performance of facilities, or identifying the source of damage or failure related to landslides, slopes, dam/levee breaches, permanent ground deformations from earthquakes, ground motions or vibrations, excessive settlement, expansive soil, collapsible soil, sinkholes, pipe jacking/micro-tunneling, internal erosion (piping), and foun-

dation and retaining wall failures. Our staff are also experts at remote sensing and air photo interpretation.

The Civil Engineering Practice is currently hiring for a **Managing Engineer** (Geotechnical Engineering) for our Boulder, CO, office. Exponent's Geotechnical group is experiencing tremendous growth and is looking for an established consultant to join the team. This person should be experienced in the field of geotechnical engineering and be able to demonstrate expertise in one or more of the following: stability of levees, vibration monitoring and analysis, deep excavations, and shallow and deep foundations.

Responsibilities for this position include:

- Managing existing Exponent clients
- Developing new business
- Recruiting, hiring, and retaining renown civil and geotechnical engineering talent
- Coordinating and cross-selling in a multidisciplinary environment
- Continuing professional development

Qualifications for this position include:

- M.S. or Ph.D. in Civil/Geotechnical Engineering with a minimum of 10 years' experience
- Professional Engineer license in the state of Colorado is preferred
- An outstanding professional reputation with an existing strong client base
- Excellent written and verbal communication skills
- Strong leadership skills and the ability to support multiple group projects

For consideration, please apply online at www.exponent.com/career and reference "4338" as the keyword, or click here: [Application Page \(4338\)](#).

EMPLOYMENT OPPORTUNITIES

Structural Engineers Association of Colorado

STRUCTURAL CONSULTANTS INCORPORATED

Structural Consultants, Inc. (SCI), established in 1977, is a full service structural engineering consulting firm located in Denver, Colorado. We offer comprehensive design and consulting services to architects, owners, developers, general contractors, sub-contractors, fabricators and suppliers. We have extensive design experience in the commercial, medical, educational, hospitality, financial, industrial, and recreational industries. We offer unique design services in the areas of renovation/rehabilitation, and specialized medical facilities to house sensitive equipment such as MRI's, Linear Accelerators, and Gamma Knives. Detailed attention to our clients' needs is a hallmark of our highly personalized service. We deliver sound, creative engineering conveyed through clear concise documents. We are an industry leader in employing Building Information Modeling (BIM) and Integrated Project Delivery (IPD) and Virtual Design and Construction (VDC) processes.

SCI is seeking an individual with the following qualifications to join our staff as a Project Manager:

- A highly motivated life-long learner, with excellent written and oral communications skills
- Enjoys a collaborative work environment, in the office or on the job site
- A minimum of 8 to 10 years of progressive experience as a structural engineer
- A registered P.E. in the State of Colorado, or the ability to obtain by reciprocity
- The ability to manage budgets and schedules for multiple projects
- Experience preparing calculations, specifica-

tions and construction drawings for projects

- Performing shop drawing review and job site observations
- Experience managing engineering staff and 3D modeling staff
- Must be skilled with a variety of commercial analysis and design software, including RAM Structure, RISA 3D, SAP, ETABS, Enercalc and TEDDS.
- Proficient with office production software, including Word, Excel, Mathcad, Bluebeam.
- Strong technical skills with a variety of structural systems and materials
- Familiar with a variety of project delivery methods
- Experience with peer reviews preferred
- Participation in state construction and design industry professional organizations
- A Master of Science Engineering degree in civil-structural or structural engineering preferred
- Experience with viewing/navigating Revit Structure and TEKLA models preferred

SCI is located in the North Cherry Creek neighborhood of Denver. We offer a comprehensive salary and benefits package. Interested candidates can submit their resumes to info@SCI-Denver.com

Please see our website at www.sci-denver.com for additional information.

ANNOUNCEMENTS

Structural Engineers Association of Colorado

2015 SEAC SCHOLARSHIP RECIPIENTS

The SEAC Scholarship Committee is pleased to announce this year's recipients.

Kate Benton: After attending Carnegie Mellon for her undergraduate studies, Ms. Benton worked as a structural engineer at Westinghouse Electric Company. After several years working there, she made the difficult decision to leave Westinghouse to continue her studies. Ms. Benton is currently enrolled in the Graduate program at CU Boulder and is an avid Ultimate Frisbee player.

Nathan Stambaugh: Nathan will be enrolled at CU Boulder as a senior next fall. Nathan is a Colorado native. He is the current President of the CU Boulder Chapter of ASCE and the incoming President for the Tau Beta Pi Honor Society. Nathan has participated in the concrete canoe and EERI Balsawood tower competitions in addition to his studies.

WELCOME

PLEASE WELCOME OUR NEWEST MEMBERS

Ryan Beck (Affiliate Member)
CTL/Thompson, Inc.

Michelle Black (Affiliate Member)
Martin/Martin, Inc.

David Burnett (Professional Member)
AEI Corporation

Daniel Stadig (Professional Member)
The Leffler Group, Inc.

SPONSORS

YOUR LOGO COULD GO HERE

Do you know someone who might be interested in sponsoring a SEAC meeting?

Please contact Paul House,
Past President, at
303.399.5154 or
paul@sci-denver.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 the Committee Chair or Board Liaison.

Committee	Chairperson	Contact Phone	Board Liaison
BIM	Dezi Mackey ,	303.431.6100	Don Carroll
Building Dept. Survey	DORMANT		Bob Pattillo
Business Management	Wayne Muir ,	303.399.5154	Paul Hause
Construction Industry	Mark Cormier ,	303.444.1951	Paul Doak
Denver Building Dept.	Jerry Maly ,	303.914.4300	Paul Hause
Education	Irena Kahanek	720.407.1031	Susan Jorgenson
	Chad Mitchell ,		
Ethics	Peter Marxhausen ,	303.947.5375	Bob Pattillo
Membership	Jerry Maly ,	303.914.4300	Ben Cook
Nominating	Jerry Maly ,	303.914.4300	Paul Hause
Northern Colorado	Dale Jones ,	970.619.8986	Bob Pattillo
Precast Concrete	Alex Mihaylov ,	303.298.1900	Paul Doak
SEER	Brent Norris ,	303.860.9021	Rob Jackson
	Mike Piper ,	303.431.6100	
Scholarship	Jeanette Torrents ,	303.444.1951	Don Carroll
Seismic Standards	James Harris ,	303.860.9021	Ben Cook
Snow Loads	Jeanette Torrents ,	303.444.1951	Bob Pattillo
Standard of Practice	Jim Ness ,	303.623.4927	Paul Doak
Steel Materials	Ben Cook ,	303.914.4300	Ben Cook
Wind Loads	Jeanette Torrents ,	303.444.1951	Rob Jackson
Young Engineers	Mathew Peterson ,	303.726.2909	Paul Hause