



State President's Message



I hope you all enjoyed the holidays! This is the time of year when our convention planning is getting well underway. We're planning to have a specific date and location to announce within the next few weeks. After that, we'll contact potential speakers and exhibitors. The convention planning committee is always looking for input from our members. I've posted a forum on the Convention Committee page of our website where our members can provide an opinion or suggestion. Here's a link to make it even easier (<http://www.seaoa.org/page-1051521/8428755>).

SEAOA could use your help. The board of directors is always looking for members who want to get more involved. Right now, we would like to find a Membership Committee Chairperson. This person would help find ways to expand our membership and keep our members engaged. If this sounds like something you might enjoy, please send an email to info@seaoa.org or talk to any of our board members.

Here's to great 2020!

Andy Dileo, PE, SE
SEAOA State President

In This Issue

- ▶ [State President's Message](#)
 - ▶ [Central Chapter Chairperson's Message](#)
 - ▶ [Tucson Chapter President's Message](#)
 - ▶ [Tucson Chapter Student Night](#)
 - ▶ [Call for Membership Committee Chair](#)
 - ▶ [SEAOA's Annual Egg Drop Competition and Fundraiser](#)
 - ▶ [YMG President's Message](#)
 - ▶ [The Masonry Society Meeting Minutes](#)
 - ▶ [E-Day at the Mall](#)
 - ▶ [Future Cities Competition: Volunteers Needed](#)
 - ▶ [2019 NCSEA Summit Summary](#)
 - ▶ [NCSEA Benefits](#)
- Next newsletter to be published on April 10, 2020 – articles to be submitted by March 31st*



JANUARY CENTRAL CHAPTER MEETING
[Updates to Helical Pile Acceptance Criteria and PTI Guide for Evaluation of Slab-on-Grade Foundations](#)
 January 21, 2020
 5:30 pm



CONTACT US
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 Tempe, AZ 85280
 602-492-6732
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JANUARY TUCSON CHAPTER MEETING
[Structural Strengthening and Concrete Repair](#)
 January 15, 2020
 11:30 am

Central Chapter Chairperson's Message



Happy New Years to all. 2020 is here! I hope everyone had a great Holiday Season with friends and family. I wish you all the best this upcoming year and hope that everyone remains in good health.

This year is looking to be another great year for us structural engineers and the Architecture/Engineering/Construction community.

Please note that the next Central Chapter meeting will be at 5:30pm on Tuesday, January 21, 2020 at the DoubleTree Hotel at 320 N 44th St Phoenix, AZ 85008.

Please check the SEAOA website for updates and calendar of events.

David Grapsas, P.E., S.E.
Central Chapter Chair

Tucson Chapter President's Message



The Tucson Chapter wishes all a HAPPY NEW YEAR! Our focus this year is continued support of our membership through technical development and support of our profession through member engagement and student outreach. We capped off 2019 with our Annual U of A Student Night at which member firms presented on award-winning

and on-going projects and the U of A Scholarship was awarded. More details are shared elsewhere in the Newsletter.

We look forward to an interesting spring line up for our lunch meeting presentations, including a special inspections panel at our "second annual" joint meeting with ACI and a prospective SEER Committee meeting TBD.

Please continue to join us at our monthly lunch meetings the third Wednesday of most months. The Board welcomes suggestions and new ideas. I encourage our membership to reach out to make requests for speakers, social activities, or community involvement. Our chapter and association are what we make it!

Upcoming Tucson Chapter Events:

Please look for additional information through email or the SEAOA website for upcoming Tucson Chapter Events:

- **January 15, 2020 @ 11:30 am -1:00 pm** – Tucson Chapter Lunch Meeting
Structural Strengthening and Concrete Repair with Adam Zius from Restruction Corporation; Brother John's Beer Bourbon & BBQ, 1801 N. Stone Ave, Tucson, AZ; <http://seaoa.org/event-3674822>
- **January 31, 2020**– Egg Drop Competition & Fundraiser
@ U of A Civil Engineering Courtyard Building – *see our article elsewhere in the newsletter!!*
- **February 19, 2020 @ 11:30 am – 1:00 pm** – Tucson Chapter Lunch Meeting
WWF and Engineered Structural Mesh with Jose Mendoza of Tree Island Steel; Brother John's Beer Bourbon & BBQ, 1801 N. Stone Ave, Tucson, AZ
- **March 18, 2020** – Tucson Chapter Lunch Meeting, joint meeting with ACI and Arizona Building Officials: Panel Discussion on Special Inspections. Sponsorships available. ***MORE TO COME!***

Jennifer Patronski
Tucson Chapter President

Tucson Chapter Student Night

The SEAOA Tucson Chapter proudly hosted its annual University of Arizona Student Night on December 4, 2019 at the University of Arizona Student Union. The event was focused on networking and introducing the diversity of Structural Engineering to the student attendees. Highlights of the evening included presentation of the Spring 2020 scholarship award and presentations by the U of A Student Chapter of SCE and member companies.

Scott Freestone, PE., SEAOA Tucson Chapter Scholarship Committee Chariman presented one \$1,500 scholarship to University of Arizona student Joel Hernandez. The first-generation college student and native of Yuma earned the honor with record of his dedication to his education and his passion for structural engineering. Joel is scheduled to graduate with his bachelor's degree in December 2020 and plans to pursue his master's degree.

Student representatives Garrett Hooker and Imraan Bokhari presented on behalf of UArizona Society of Civil Engineers and the Concrete Canoe and Steel Bridge teams. Pacific Southwest Conference competitions will be hosted by California State University, Fullerton in April 2020. Both teams have seen a steady climb in their success in the last few years and are looking for continued improvement with refinement of lightweight concrete mix design for the canoe and more efficient and less flexible detailing for the steel bridge.

Gil Morales, PE, of Hanlon Engineering & Associates, presented on SEAOA Award winning project Turquoise Ridge Joint Venture #1 Headframe Modifications wherein an existing headframe was converted into a ventilation plenum and airlock. The project required extensive design, demolition, and construction sequencing to incorporate the new rounded and curved plenum collar and the new structural steel-framed airlock access platform and plenum hoist doors.

Ron Schneider, PE, of Schneider Structural Engineers shared details, challenges, and successes for The Flin Mixed-Use Apartments, currently under-construction. The

new apartment structure features podium construction with two levels of cast-in-place and post-tension concrete construction supporting five stories of wood construction. The Flin is being constructed on an historic Tucson site most recently housing La Placita Village.

The evening was concluded with a round-table discussion to share advise with new engineering graduates entering the SE profession, including finding mentorship, continued learning and personal development, as well as what to expect from your employer and what your employer expects of you.

The Tucson Chapter extends huge thanks to the presenters, sponsors and attendees, and *CONGRATULATIONS* to our scholarship award winner Joel Hernandez.

Sponsors: HDR Inc.; Hess Structural; Janelle Perry Structural Engineering; ; M3 Engineering & Technology; Structural Concepts, Inc, Woods Structural.

Upcoming Tucson Chapter Events:

January 15, 2020 @ 11:30 am -1:00 pm: Tucson Chapter Lunch Meeting: Structural Strengthening and Concrete Repair; Brother John's Beer Bourbon & BBQ, 1801 N. Stone Ave, Tucson, AZ; <http://seaoa.org/event-3674822>

January 31, 2020 @ 5:00 pm: Egg Drop Competition & Fundraiser @ U of A Civil Engineering Courtyard - *Join us for an afternoon of competition, networking, dinner and prizes! Each team of 2 will be paired with 1 UArizona student to build a safe vessel to drop an egg from the Civil Building Balcony. If you cannot make it to the event, please consider being a sponsor!*

For more information, see the event page:

<http://seaoa.org/event-3653871?CalendarViewType=1&SelectedDate=1/13/2020> or email Sarah Kay Twine at sktwine@scice.com

Jennifer Patronski
Tucson Chapter President

Call for Membership Committee Chair

The SEAOA Board is looking for someone interested in serving as the Chairperson for the Membership Committee. This person would help find ways to expand our membership, increase membership participation and engagement, and provide innovative ideas to better our organization for the members. If this sounds like something you might enjoy, please send an email to info@seaoa.org or talk to any of our board members.

SAVE THE DATE

Join us for the Structural Engineers Association of Arizona's (SEAOA) **Egg Drop Competition** to benefit scholarships for U of A Engineering students.



**January 31
2020 @ 5 p.m.**



U of A Civil Engineering Building Courtyard
1209 E. 2nd St, Tucson, AZ 85719

Team Registration - \$100

2 Professionals
1 Student (assigned to team at event)

Student Registration - Free

Spectator - \$15

Registration Includes:

- Supplies for Competition
- Dinner
- 4 Raffle Tickets/Person

Sponsorship Opportunity

\$200

Sponsorship Includes:

- Company Logo on Screen at Event
- Networking with Students & Professionals
- Dinner & 4 Raffle Tickets

For Registration & Information:

<http://www.seaoa.org/event-3653871>

Or contact Sarah Kay Twine
sktwine@scice.com

Raffle Prizes!

Networking!

Competition!

Fundraising!

SEAOA's Annual Egg Drop Competition and Fundraiser

Sarah Kay Twine, EIT
Structural Concepts, Inc

SEAOA's second annual Egg Drop Competition and Fundraiser will take place on January 31st of 2020 at the Civil Engineering courtyard at the University of Arizona. Professionals in engineering, architecture, and construction, along with students interested in these same fields will take on the challenge to create a device that will protect a raw chicken egg when dropped from the second landing of the Civil Engineering courtyard staircase.

Each team of three will have twenty minutes to brainstorm and create a structure to protect their fragile egg. All teams are limited to the resources provided in their paper bag, and yes, the paper bag is fair game as one of their materials. Just as in industry, quality and functionality of the final outcome will be constrained by the given timeframe, materials, and requirements. However, the most important part will always be the life we are to protect... or in this case, an egg.

Who knows what remarkable contraptions will make their way to the top of the balcony? Will some build a parachute to slow the fall? Will others choose materials to absorb energy during impact? Or will it be a combination of both ideas? Contestants and spectators will only find out when attending this fun event! After the drop, the team with an un-cracked egg and the lightest structure will win the competition. Last year, audible "ooooohhs" and "aaahhhhs" followed with applause filled the courtyard

after each egg drop. With a dash of healthy competitiveness, each team was supportive of each other and thoroughly enjoyed seeing different ideas when given the same constraints.

This event will not strictly revolve around the competition. That evening will invite students and professionals to network with each other, to inspire one another, and to exchange information, advice, and ideas. The money raised during this fundraiser will go back to the students through SEAOA's annual scholarship. In addition to all of the fun and networking, there are raffle prizes that are hard to resist.

SEAOA would like to extend a special thank you to the sponsors from last year's Egg Drop Competition and are looking forward to many more sponsors for this year's competition and fundraiser:

DPR Construction
GLHN Architects & Engineers
Line and Space Architects
M3 Engineering
Martin, White & Griffis Structural Engineers
Roofline Supply & Delivery
Structural Concepts
Swaim Architects Associates

REQUEST FOR NEWSLETTER ARTICLES

The SEAOA Newsletter committee always appreciates input from the membership about articles and information that you'd like to see in upcoming newsletters. The newsletter is an excellent place for the SEAOA membership to share opinions, ideas and information with the rest of the association. Please contact Sal Caccavale (seccbc@cox.net) or Mark Sipes (mark_sipes@tempe.gov) if you have any articles that you'd like to submit or if there are any topics you'd like to see in future SEAOA Newsletters.



Younger Members Group President's Message



Last November the SEAOA Young Members Group toured the Mirabella at ASU project located in Tempe. Valeria Granger, the engineer of record on the project, gave the group a tour of the building and answered questions about different structural systems of the project and the current construction challenges the

team was facing. We had a large group of young engineers who were very eager to visit such a large and unique project. A lot of the engineers attended ASU for the undergraduate degree so it was amazing to see the transformation that has been going on near ASU. To end the year, we hosted a happy hour at Fate Brewing in

Scottsdale to socialize and discuss the events for this spring.



John Heck
YMG President

The Masonry Society (TMS) Meeting Minutes

The most recent TMS Meeting was held November in Scottsdale. I serve on four committees and have reported on those committees in the links below. All other committee and TMS activity can be found on the TMS website.

Links:

[General Requirements Report to Main](#)

[Construction Requirements Subcommittee](#)

[General Requirements Subcommittee \(June Meeting\)](#)

[Prestressed Subcommittee](#)

[General Requirements Subcommittee \(November Meeting\)](#)

Respectfully Submitted,
Paul Scott
Code Committee Co-Chair

2020 E-Day at the Mall – Engineers Week Tucson Event

In the United States, Engineer's Week (E-Week) is celebrated during the week that includes George Washington's Birthday (February 22nd). This week celebrates the many contributions that engineering brings to our society and promotes its benefits amongst different sectors of the society. More information can be found at <https://www.discovere.org/our-programs/engineers-week>

E-Week Tucson E-Day at the Mall has been an event held in Tucson over the past years. It brings a number of different engineering societies and corporations, including the SEAOA Tucson Chapter, to share their passion about engineering in a fun way that attracts several children, teenagers and parents to learn while playing. Each participant sets up a table or booth, typically at a shopping mall on a weekend during Engineer's Week. Attendees get to interact in a fun way to detect the principles that are used to create the different elements that, through engineering, move, flow, protect and develop our cities and everyday life. This year's event will be held on Saturday, February 22, 10:30am – 2:30pm at the Park Place Mall in Tucson. Tucson Chapter members may contact Allan Ortega with M3 Engineering and Technology Corp (aortega@m3eng.com or [520.293.1488](tel:520.293.1488)) for other information.

The Future City Competition is another Engineers Week activity that is currently happening in the Phoenix area. Please see the Future Cities news article in this newsletter for more details.

Future Cities Competition: Volunteers Needed

The SEAOA is once again sponsoring an award at the Future Cities competition. This is an annual event for 6th-8th grade students. The purpose is to expose these students to engineering and encourage this as a possible future career path.

The students have been preparing since September. Around 100 teams normally make it to the regional finals. Teams of 3-4 students create a computer model of a city, write essays and narratives, build a scale model of a part of their city and finally, make a 7-minute presentation. Many societies such as the SEAOA give out awards pertinent to our fields. There is also an overall contest winning team which will go to Washington, DC in February to compete nationally.

We are looking for some volunteers to help out.

The time commitment is not significant. We will get 1-3 page essays from the teams to review for items relating to structural engineering. We will split them up among the judges and then share the ones that relate to our field. At this time, it is not clear if we will be able to view the models prior to the competition day.

The competition itself is on the morning of January 25 (Saturday) at Casteel High School - 24901 S. Power Road, Queen Creek, AZ 85142. We can talk with the teams and see their presentations.

If anyone is able to participate, your help would be appreciated.

Please let Richard Dahlmann (rdahlmann@ctsaz.com) know if you can help out or would like more details.

It is a lot of fun seeing what ideas the kids come up with.

2019 NCSEA Summit Summary

There is nothing more rewarding than going back to Disneyland as an adult. This year our SEAOA delegate Mike Lu requested that I attend the delegate meetings in LA due to his urgent trip overseas due to work, and I gladly accepted. It was great spending time with other SEA delegates who kindly shared their experiences with other SEAs and what they are doing to make their SEAs better for their members. It was nice to meet the NCSEA leadership and discuss their views of the national association and what they see for the SEAs in the future. I heard more than once that all members should come forward to make their SEAs better. In that regard, let's all come together to make our SEAOA better and stronger. Let's take part in our association's committees and volunteer opportunities.

The following are few points I noted while I was at conference:

1. NCSEA has a continuing education committee. They can provide references and recommendations for monthly lunch and learn meetings or bigger seminars. This committee also does surveys on the speakers and they can provide more information on how the speaking engagement was received. Charis with NCSEA are Mike Tylk and Carrie Johnson.
2. NCSEA code committee can work with the SEAOA code committee. They welcome M.O. liaison to participate on NCSEA code advisory committee. If there are any code change proposals, SEAOA can forward them to NCSEA and they can include them in their proposal to ICC. Chair for Code Advisory Committee is Thomas DiBlasi.
3. NCSEA licensure committee is a good resource for SEAOA to push exclusive SE licensure in Arizona. They have worked with a few states to get the SE exclusive license done. Chairs are Alan Kirkpatrick and Kristin Killgore.
4. Alabama is doing three full-day seminars plus an annual conference. SEAOA needs to think of doing a one-day technical/or

management seminars. Alabama also did an electronic mailer to all non-members and gained ten more members. Can SEAOA generate non-members list from contacting big firms, then have a targeted electronic mailer to them to get into membership?

5. SEAOA has active student liaison who works with students while they are in college and gives recommendations on how to transition into the workforce. A lot of these students become members once they join the workforce. SEAOA can have someone as student liaison at ASU and SEAOA.
6. In Colorado, the SEA does technical and career path presentations to the students at colleges which inspires them to join SEA once they graduate. At SEAOA we have talked about this before.
7. At Connecticut, they have compiled the list of all the firms in the state and have individually invited the leaders of the firms to have dinner with the SEA leadership to discuss how all of their employees can get involved with SEA and participate. This is something SEAOA needs to do. We can compile a list of all the firms in Tucson and Phoenix and other areas. This will be an ongoing effort but I like the personalized approach and it will help grow the membership. SEAOA can also provide a Lunch and Learn to big offices in order to do marketing and attract new members.
8. In Illinois, they have an awards committee like we do, but they also do four individual yearly awards also in recognition of individual member's contributions to the SEA. This is something we can start so that people are more aware of what we do and have recognition.

Arpan Tailor
SEAOA Past President



NCSEA Benefits for Individual Members of State SEAs

As a member of your **state-level SEA**, the following NCSEA benefits are available:

- A subscription to *STRUCTURE* magazine, the leading monthly magazine for structural engineering, both print and electronic versions.
- A subscription to *Structural Connection*, NCSEA's monthly member e-newsletter with information on NCSEA and SEA activities and events.
- An opportunity to secure a yearly subscription to unlimited live (25+ per year) and recorded webinars (from a library of 120+) available on-demand, 24/7/365. *All NCSEA webinars are Diamond Reviewed for CE credit in all 50 states.*
- An opportunity to join NCSEA Committees including: Basic Education, Code Advisory, Communications, Continuing Education, Publications, Resilience, Structural Engineering Engagement and Equity (SE3), Structural Engineering Emergency Response (SEER), Structural Engineering Summit, Structural Licensure and Young Member Group Support.
- Access to NCSEA web-based communities, including those on LinkedIn and Basecamp.
- Access to scholarships to the NCSEA Structural Engineering Summit for young members.
- Access to the NCSEA Member Portal that provides:
 - Committee documents & resources.
 - Tools for your SEA such as an MO Speaker List, the MO Toolbox and the MO Summary Report
 - Young member resources, including the NCSEA Young Member Start-Up & Resource Guide.
 - Resources for engineers, including the Essential Book list for a Structural Engineer's Library.
 - Emergency response information, including the SEER Manual.

All SEA Members already have an account. Click the MEMBER LOGIN link on www.ncsea.com to access member-only resources. If you've never logged in, use the email you provided to your SEA and the password NCSEA1234.

- Access to the NCSEA Education Portal that provides online access to your PDH hours earned through NCSEA live and recorded webinars.
- Discounts for webinars, the NCSEA SE Refresher & Review Course, the Structural Engineering Summit, and various NCSEA and ICC publications.

In addition, your SEA directly receives additional benefits from NCSEA:

- One recorded online webinar each year for free.
- Access to the Grant Program to help secure funding for Member Organization projects, programs and advancement.
- Telephone, face-to-face and web-based support to help your SEA run an effective volunteer-driven organization.
- Connection between your state SEA committees and national NCSEA Committees.
- Access to monthly MO Communication webinars to support your SEA operations.
- Recommended speakers list for your education programming.
- Exposure for your news and events through NCSEA's E-Newsletter and website.