

From: [SEAoAL](#)
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Subject: SEAoAL Newsletter, 7th Annual Conference & XPO, Larry Novak Speaking!!
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SEAoAL June Newsletter, 7th Annual SEAoAL Conference & XPO - Register today, Hear Larry Novak!



SEAoAL Dynamic Columns

Quarterly Newsletter: June 2017

Concrete Heroes

My father was a stone mason and home builder. He believed in hard work and passed on to me a very strong work ethic. I grew up around jobsites and construction workers, especially concrete and masonry workers. My dad hired no-nonsense types who liked to work hard, get paid immediately, and finish the job with a smile. He admired them greatly, and I learned to admire them as well. My first job as an adult was as a field and laboratory geotechnical specialist in the military, which allowed me to work closely with these front-line workers. I continued to work in construction in one form or another for the next decade until I earned my engineering degree. My feeling toward concrete and masonry workers can best be described as reverence. Like the reverence reserved for one's ancestors who gladly work so hard to pass on a better life.



Concrete and masonry work is hard; it is essentially casting new stone. And those who work it have to be just as hard. Working concrete is tough because it is heavy. Wheeling concrete around is heavy. The aggregate is heavy. Carrying concrete masonry units is heavy. The tools used to work concrete, such as concrete vibrators, screeds, and floats, as well as trucks, pay loaders, and mixing plants are large and heavy. Boxing, screeding, and raking concrete is dirty and difficult work. It is hard to function while wading around in such a thick and dense paste. The liquid stone must be worked into all the crevasses and around the reinforcing to result in solid structures that perform as designed. We continually ask more from them. We specify ever stronger concrete, which means less water and stiffer cement, making

concrete even harder to work.

Working concrete and masonry requires speed. Concrete begins to crystalize and harden just a few short hours after it is mixed, so speed is essential to a successful pour. The time it takes to transport the concrete from the mixing plant to the jobsite uses up a big chunk of this time already. Concrete hydrates very rapidly when the reaction begins, so it needs to be cast and finished before it becomes too hard and before the reaction is complete. Concrete workers are typically on the job early. They need time to finish, so they must start early, and work quickly. They must also be instantly responsive to the direction of the engineers and supervisors.

Concrete and masonry work is rough work; it is brutal on a body. Working concrete is hard on your muscles, bones, joints, and skin. Concrete paste is caustic and the fine dust gets everywhere. Hydrated concrete is abrasive. Steel reinforcing is tough to work with; it is heavy, and dense, and unforgiving as well...and it can be dangerous. Cleaning the equipment is hard; it is difficult to get the residue of the wet paste completely off the tools. It is nearly impossible to clean concrete trucks, especially removing hardened concrete from the drum. Everyone who has felt the reaction from a jackhammer understands the Third Law completely.

And finally, concrete workers must have a strong character. In concrete, a mediocre job can be hidden, and will likely result in a weak structure. Concrete does not forgive; it demands a heavy payment for mistakes and a job half-done. Only the most conscientious workers remain; those who will do the job right despite its difficulty. It is hard not to admire those who embrace such work. And who have the strong character to match. They get up every morning, take a painkiller, and go back to it; every day.

As engineers, construction managers, specifiers, and designers we should never forget the debt we owe these folks for the effort they put in to help us realize the plans we make. Please take the next opportunity to let them know they are appreciated. Without them, we cannot build.

Bart Berneche
2017 SEAOAL President

2017 SEAOAL 7th Annual Conference & XPO: It's All About CONCRETE (6.5 PDH)

It's early this year - August 3rd, 2017

Register online at www.seaoal.com

Conference Speakers

Larry Novak – Larry Novak is the Senior Director of Structural Engineering & Codes for the Portland Cement Association. Prior to joining PCA, he was an Associate Partner with Skidmore, Owings & Merrill where he served as the lead structural engineer for the Burj Khalifa, the world's tallest building. Novak serves on several

technical committees, including the ACI 318 Code committee and the ACI 130 committee on Sustainability of Concrete. He has served as Director on the governing board for organizations including SEAOL, TCA and the Illinois Engineering Hall of Fame. He was selected as the “Centennial Lecturer” in engineering and was named the “Citizen Engineer of the Year” by the Illinois Chapter of ASCE. In 2010, he was selected as the ACI “Educational Speaker of the Year” and in 2017 he was bestowed the ACI “Educational Award” for his contributions to the industry.

Mr. Novak is such an engaging speaker. If you missed him at our February meeting, don't make that mistake again! He will present the following topics:

- **The Practicing Engineer’s Guide to Designing by Strut and Tie Method (ACI 318-14)**
- **Economical Design of Concrete Buildings**

George Garber – George Garber is a currently a concrete slab consultant based in Lexington Kentucky. He is recognized as one of the leading consultants in the world on concrete floors, floor flatness and levelness issues. He served on the team that developed the “dipstick” which was the first tool available to test floor flatness. Garber is also a proficient author having written four books, Design and Construction of Concrete Floors, Backroad Bicycling in Kentucky's Bluegrass, Concrete Flatwork for Homeowners and Contractors, and Paving with Pervious Concrete. He will present the following topics:

- **Best Practices for Design of Concrete Floors**
- **Developing Floor Flatness Specs that Work for the Contractor and Owner**

Wayne Wilson – Wayne Wilson is a Senior Technical Service Engineer with Holcim Cement where he is responsible for Marketing Quality & Technical Support for Portland Cement and Slag Cement sales in the southeastern US. He has over 30 years’ experience in the construction materials testing and analysis field. He is an experienced concrete petrographer and has investigated concrete and cement performance problems throughout the world. He graduated with a degree in Civil Engineering Technology from Southern Polytechnic State University in 1987; is a Register Professional Engineer in Georgia, Alabama, North Carolina & South Carolina; is a member of ASTM Committees: C01 on Cement, C09 on Concrete & Aggregates, C12 on Masonry and C15 on Masonry Units; he serves on three ACI Committees: 231 Early-Age Properties, C610 Concrete Field Technician Certification and C630 Concrete Inspector Certification. He is a Past-President of The Georgia ACI Chapter and currently serves as the Chairmen of their Certification and Accreditation Board. He will present the following topic:

- **21st Century Mix Designs**

Round Table Discussion on Current Engineering Specifications versus Current Ready Mix Industry Practices

Round Table Participants

Dave Mandel – Dave Mandel serves as the technical director for Sequatchie Concrete with operations stretching across TN and AL. He has spent the past 14 years in the ready-mix industry. Prior to joining the concrete industry, he spent 25 years working for geotechnical and testing firms assisting ready mix companies with quality control and mix design.

Bobby Dowdy – Bobby Dowdy serves as the Regional Quality Assurance Manager for Bayou Concrete. He has been with the company for the past 25 years. In this capacity, he is responsible for quality control, troubleshooting and mix design submittals for the company. He has been involved with several of the most notable projects in state. He has been involved with several of the most notable projects in state including TK and the RSA Tower in Mobile which is Alabama's tallest building.

Bo Canning – Bo Canning is responsible for quality control and mix designs for Kirkpatrick Concrete. He has over 30 years of concrete experience in the ready mix industry and at Thompson Engineering. Bo is a graduate of Georgia Southern University.

This is a SOLID line up of speakers who have years of (quality) concrete experience. See you in August for the XPO!

Younger Members

SEAOAL Voted Best Activity!

SEER





The SEAoAL Young Member Group hosted a booth at the annual McWane Science Center Engineering Showcase this past February. The Engineering Showcase allows for SEAoAL's practicing young professional structural engineers to introduce and explain our role as engineers to grade-school students our role in the engineering society. The children were tasked with building the tallest "structure" out of Solo Cups, while we explained the importance of a strong foundation and steady structure to resist lateral loading. We had a blast this year and the exercise was a major hit! The kids LOVED building these tall towers of cups. A huge thank you to our members who volunteered and the McWane Science Center for allowing us to be a part of this learning experience for these students!

If you would like to learn more about the SEAoAL YMG and receive updates on the upcoming events, contact Blake Greene at bgreene@tuckerjones.com.

SEAoAL and Alabama Council of the AIA joined forces again to exhibit at the Alabama League of Municipalities in Birmingham. We made some really good contacts with mayors across the state informing them that we are a resource to them for building safety after a disaster hits. They were very appreciative of this volunteer service. Let's pray we are not needed, but if a disaster strikes, SEAoAL & AIA members will be ready!

NCSEA has developed a web-based database to make it easier to contact structural engineers for assessments following a disaster. The database lists those who are interested in assisting with post-disaster condition assessments of structures. To add your name to the list, click the following link.

<http://www.ncsea-seer.com/>

Advocacy

Vulcan's First Adult Egg Drop

SEAOAL Member WINS!



Congratulations to SEAOAL member Colby Butterfield whose team won the first Vulcan Adult Egg Drop for Best Laid EGG! Birchfield Penuel Architects team came in second place and Ghost Train Brewery took home the Green Award. Teams had to create a "nest" for the egg to safely ride the freefall in from the top of Vulcan and survive the crash without a SPLAT. It is not as easy as you might think! Congrats to Colby and team. To view the video, please visit our FB page. Hope to have more SEAOAL members participate in 2018.

SEAOAL Member Benefits - Be Smart!!!

Save money by being an SEAOAL member. IF you join today and register for the annual conference, you save \$45. Membership saves you money!! It is common sense to join SEAOAL! Plus we are advocating for you in Montgomery, providing quality educational PDHs, awarding



This year, SEAOAL sponsored the Auburn University's and University of Alabama's respective Bridge Building teams. The teams compete at the annual Southeast Conference, and the winners compete at the ASCE Student Conference. Preparing and competing gives the students experience in important aspects of engineering including design, building and teamwork.

"We went down to Boca Raton and had a great experience at the ASCE Conference. The whole competition was a great success. The steel bridge was a lot of fun and our six team members worked well together. We completed construction and passed both of the vertical load tests. This year's loading sequence was 1700lbs in the center of the bridge and 800lbs to one end. We successfully loaded the 1700lbs and had loaded 680lbs of the 800 when one of our members buckled. This buckling was grounds for disqualification. This whole competition was a great learning experience for my team and myself. We really appreciate SEAOAL support."

-Austin Harmon
ASCE Steel Bridge Captain

Jeff Hillman spoke to the students at AU. He presented photos of projects gone bad and asked if they could point out the mishap. Students were very engaged. Andrew Marlin gave a presentation to the ASCE Students at UA. Members of SEAOAL regularly give presentations to students at Alabama universities.

scholarships to structural engineering students and encouraging students to pursue structural engineering. Who else would do all of this for you? ONLY SEAoAL.

Join today at
www.seaoal.com.

SEAoAL is dedicated to supporting and encouraging the next generation of structural engineers. If you would like to get involved in advocacy and present to students and others in our community, email

rhea@karmamanagementinc.com.

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