



THE  
**STRUCTURAL ENGINEER**

Precast Concrete

## Parking Structures

Evaluation and Repairs

Precast concrete parking structures make-up over 50 percent of all the parking structures built in the United States. Many of these structures have experienced distress due to inadequate design, construction defects, material defects, or fire damage. The presenter will provide a general overview of parking structures including structural elements, loading, and connections and present five different case studies of parking structures that experienced some type of distress. For each case study the presenter will discuss the evaluation, design, and repairs that were performed.

Mr. Alfredo Bustamante is a Senior Associate with the Houston Office of Wiss, Janney, Elstner Associates, Inc. He is a licensed professional engineer in the states of Texas and Louisiana. He received his bachelors of science in Civil Engineering from Old Dominion University in Norfolk, VA and master of science in engineering with structural engineering emphasis from University of Illinois at Champaign-Urbana, Illinois.

Mr. Bustamante has over 12 years of experience as a project manager in a variety of structural, architectural, and material distress related projects. His experience includes the evaluation, design, and construction phase services of many precast concrete parking structures. Mr. Bustamante is a member of the Precast and Prestressed Concrete Institute (PCI) Technical Committee on Parking Structures, the American Concrete Institute (ACI), the American Society of Civil Engineers (ASCE), The National Society of Professional Engineers (NSPE), and the American Institute of Steel Construction (AISC).

Sponsored by **WJE**

---

### MEETING INFO

---

WHEN:	WHERE:	COST:	RSVP:	UPCOMING MEETINGS
6:00 pm Social 6:30 pm Dinner 7:00 pm Program	HESS Engineering and Scientific Society 5430 Westheimer Houston, TX 77056 713.627.2283	Members: \$25.00 Non-members: \$35.00 Student members & Non dinner guests \$10.00	<a href="#">Click Here</a> to register online. The deadline is 12:00pm, the Tuesday before	October 17, 2014 TBD  November 21, 2014 TBD

[CLICK HERE](#) TO REGISTER FOR THIS MEETING

## President's Address

### Steve Wilkerson, PhD, PE

Dear fellow Houston/Gulf Coast Chapter members: I hope you all had a chance to take a break this summer and get away for a holiday or two. Business has been booming in Houston and we as a profession, are very hardworking and deserving of a break. After reviewing the results of our impromptu survey, the number one reason that SEAOt members do not attend meetings regularly is due to conflicts, other commitments, or just being too busy. That being said, I hope you find the time to attend the next monthly meeting on September 18.

There's little I enjoy more than analyzing data, so I plan to discuss the survey results a bit more below. But first, I have a few things I need to mention. In the last newsletter I reminded everyone that the state SEAOt convention is to be hosted in Houston in 2015. The key to a successful convention is lots of planning, so the board needs to appoint a planning committee soon to make some key decisions. I would like to hear feedback from members about this and am also open to volunteers for the planning committee.

Also, I'd like to say farewell to Charles Ma, our former newsletter editor who has accepted a position at KPFF in San Francisco. And, I'd like to welcome Jennifer Ju, our new newsletter editor to the board. Jennifer is an engineer with Cardno Haynes Whaley, and we are very glad she has taken over this vital role.

The main focus of the survey was to get information about attendance at monthly SEAOt meetings. First we asked you to make a short statement about why you may not attend regularly, and second we asked you to weigh-in on several suggestions about what might make you attend more often. The responses to the first part are in Table 1 below:

Table 1 - Reasons that members may not attend meetings

Too tired after work	14.0%
Long commute/bad traffic	5.3%
Too busy/Conflicts or other commitments	35.1%
Cost	5.3%
Location	1.8%
Meetings not relevant	7.0%
Other	12.3%
No response or not applicable	19.3%



Our top priority – tailor our services to your objectives. We simplify complex issues and provide cost-effective solutions, regardless of the project's size or scope.

**Terracon**  
 14 Offices in Texas  
 (713) 690 8989  
 terracon.com

### GEOTECH ENGINEERING AND TESTING

- o Geotechnical Engineering
- o Environmental Engineering
- o Construction Materials Engineering
- o Forensic Engineering

#### Areas of Specialization:

- o High Rise and Low Rise Buildings
- o Land Development
- o Petrochemical Complexes
- o Chain Store
- o Transportation
- o Commercial Developments
- o Industrial Facilities
- o Port and Harbor Facilities
- o Aviation
- o Public Infrastructure

Tel: (713) 699-4000

Fax (713) 699-9200

Website: [WWW.GEOTECHENG.COM](http://WWW.GEOTECHENG.COM)

TEXAS • LOUISIANA • NEW MEXICO • OKLAHOMA  
 Certified as HUB and DBE

## President's Address (continued)

### Steve Wilkerson, PhD, PE

As I mentioned earlier, most people are rather busy and can't attend because of other commitments. I was pleased to see that neither cost, location, nor lack of relevance was an issue with most members.

For the second part (see Table 2 below), the most popular suggestion for meetings was to offer a forum for discussion of structural engineering issues. This is something new, but certainly something that we could accommodate. The next most popular suggestion was to offer opportunities for networking with clients or contractors.

We have been bringing contractors to meetings regularly this year as sponsors, which I think is great for fostering relationships. We would like to explore ideas for interacting with our clients as well.

One possibility is to try to arrange a joint meeting with the Houston Chapter of AIA. This has already been suggested to the local chapter president Janis Brackett, and once we decide on a format for the joint meeting, it will probably take place. Other suggested options garnered some attention, and will be considered in the future.

Table 2 - Options that may increase member attendance.

Option	% That "Agree"
Forum to discuss structural engineering questions/software/case studies	67%
Networking opportunities with clients/contractors	44%
Networking opportunities to fill/seek structural engineering job openings	37%
Opportunity for involvement with technical code committees	37%
Professional exam study group (PE, LEED, etc.)	33%
More convenient time	32%
Lower cost	18%
Different location	18%

Finally, I'd like to congratulate Everett Baker for being the lucky recipient of a Best Buy Gift Card in the drawing for participants in the survey. I'll give the prize to Everett at this month's meeting. Thanks to all those who participated in the survey - it's valuable to me to get this kind of feedback, even though only from a cross-section of members. The results validate many of the policies that we've been using to run the organization all these years.

Thanks,  
-Steve

**Delta Structural Technology, Inc.**



**Solutions that  
Make the  
World  
Stronger**

**Composite Fiberwrap Contractors & Engineers**

*Specializing in Structural Repair & Upgrades of Concrete*

**Structural Upgrades**

Corrosion Repair    Flood Mitigation

Blast Mitigation    Petrochemical

Commercial    Crack Injection

Renovations    Medical

Industrial    Marine

Retrofits    Food



**Structural Technology, Inc**

**Repair ▲ Restoration ▲ Strengthening**

Ph: 281-821-3006    Fax: 936-539-2118    www.fiberwrap.com

## Texas A&M Student Chapter Report Kim Lyons

Another new semester has begun here at Texas A&M University. The fall semester holds many exciting things for Aggies: football, cooler weather, SEAOt meetings, and a lot of new members! There are around 60 new graduate students in the structural engineering program alone.

We are kicking off the month of September with the Houston's Chapter very own Al Bustamante from WJE as our first guest speaker of the semester. Al will be discussing the engineering problems and solutions associated with concrete parking structures. He is presenting three different case studies.

Next, TAMU SEAOt is having a special meeting on Tuesday, September 9th, with Texas A&M Transportation Institute where research opportunities will be discussed. We look forward to wrapping up the month at the Houston/Gulf Coast monthly meeting. Be expecting a lot of students. Happy fall everyone and Gig'em Aggies

If you are interested in joining one of our meetings or sharing your engineering experience and expertise, please feel free to contact me at [officers@seao.tamu.edu](mailto:officers@seao.tamu.edu). You can also visit our website at [seao.tamu.edu](http://seao.tamu.edu) for more information regarding our scheduled events..

**Concrete Repair and Protection**

Preservation • Restoration • Repair  
Maintenance of Structural Concrete

Renewal and Rehabilitation of Infrastructure  
Cost Effective, Time Efficient Solutions to  
Concrete Problems

Commercial • Industrial  
Petrochemical • Marine

**EPOXY DESIGN SYSTEMS, INC.**  
STRUCTURAL CONCRETE REPAIR

We create the software  
that helps you create everything else.

**RISA**  
DESIGN TOOLS FOR STRUCTURAL ENGINEERING  
[risa.com](http://risa.com)

**SIMPSON Strong-Tie**

[WWW.STRONGTIE.COM](http://WWW.STRONGTIE.COM)

- Adhesive and Mechanical Anchors
- Direct Fastening Systems
- Repair, Protection and Strengthening Products
- Cold-Formed Steel Connectors
- Lateral Systems
- Fasteners
- Wood Construction Connectors

Providing a wide range of construction solutions for your Infrastructure, Commercial and Industrial applications

**Anchor Designer™ Software for ACI 318, ETAG, and CSA Version 2.3**

**CFS Designer™ Software for AISI Version 1.1.0**

Simpson Strong-Tie® Anchor Designer™ Software is the latest anchorage design tool for structural engineers to satisfy the strength design provisions of ACI 318 Appendix D, CAN/CSA A23.3 Annex D, ETAG 001 Annex C or EOTA TR029 design methodologies.  
\*\*\*NEW FEM — PLATE THICKNESS CALCULATOR \*\*\*

**Chad Eades**  
(512) 992-8494  
[CEades@strongtie.com](mailto:CEades@strongtie.com)  
Technical Representative

Simpson Strong-Tie® CFS Designer™ gives cold-formed steel Designers the ability to design CFS stud and track members according to AISI specifications and to analyze complex beam loading and span conditions through an intuitive user interface. The program allows the design of multiple systems within the same job file, and supports connection design for specific Simpson Strong-Tie® curtain wall and bridging connectors.

## Treasurer's Note

Jonathan Warshaw, PE

To All Members:

SEAoT's Bank balance as of September 8, 2014 is \$45,025.57.

Thank you for taking time to make your reservations. It certainly does help to get an accurate head count. If you are not doing your reservations online, I would like to recommend all to register and pay on line at <http://www.seaot.org/houston/reservations.cfm>. Paying on line will help keep the meal orders under control, and it also speeds up the check-in process.

If you are not sure if you are coming, you can still register on line or email me at the address below up to the Wednesday morning before the Thursday meeting. If you are not eating, and just want to register for the presentation, it is good to do that online also. Members cost for dinner and the presentation is \$25, Non Members \$35. Students are \$10 (dinner included) and just presentation (no dinner) is \$10.

While paying online will remain the preferred method, as an added convenience we will continue to accept credit card payments at the door. This seems to be convenient for many folks, and still allows us to provide you with a receipt of your attendance. However, please still try and register online or email me so that we can get an accurate head count for meals.

Sincerely,  
Jonathan Warshaw, PE  
Structural Engineers Association of Texas (SEAoT)  
Houston/Gulf Coast Chapter Treasurer  
[jwarshaw@wje.com](mailto:jwarshaw@wje.com)



**Leading National Provider for:**

- Geotechnical Engineering
- Construction Materials Testing
- Special Inspections
- Industrial Hygiene
- Environmental Consulting & Management

23+ Offices Nationwide

**Contact:**  
Mariana Moreno  
3660 Westchase Drive  
Houston, TX 77042  
P: (713)943-4482  
F: (713)977-4145  
[www.cardno.com](http://www.cardno.com)



## One Company, One Call.

PSI is your best choice for full-service engineering, testing and environmental services. Our experienced staff of professionals has the expertise to meet your project requirements.

- Geotechnical Engineering
- Construction Materials Testing & Engineering
- Non-Destructive Services
- Environmental Consulting
- Industrial Hygiene Services
- Facilities & Roof Consulting
- Specialty Engineering & Testing

**PSI** Information  
To Build On  
Engineering • Consulting • Testing

**Texas Office Locations:**

Austin • Clute • Corpus Christi • El Paso • Ft. Worth  
Harker Heights • Harlingen • Houston • La Porte • Longview  
McKinney • San Antonio • Spring • Victoria

**800.548.7901**

[www.psiusa.com](http://www.psiusa.com) e-mail: [info@psiusa.com](mailto:info@psiusa.com)

## Tolunay-Wong Engineers, Inc.

- Geotechnical Engineering
- Environmental Consulting
- Construction Materials Testing
- Deep Foundations Testing

**Houston Office (Headquarters)**

10710 South Sam Houston Parkway West, Suite 100  
Houston, TX 77031

Phone: 713-722-7064 Fax: 713-722-0319

Contact: Daniel Wong, Ph.D., P.E.

Email: [d Wong@tweinc.com](mailto:d Wong@tweinc.com)

**Other Offices**

Beaumont, TX • Corpus Christi, TX • Dallas, TX  
La Porte, TX • Baton Rouge, LA

Visit us at: [www.tweinc.com](http://www.tweinc.com)



## 2014 Continuing Education Seminar For Professional Engineers

NCI is pleased to announce open registration for our annual Continuing Education Seminar for engineers. Registration for the one-day seminar is open to all levels of engineering capabilities. Whether you've been in the profession for one year or 30 years, this course offers up-to-date training to assist you in your career.

This seminar is intended to provide essential continuing education units (CEU) required by most states for maintaining engineering licenses. Seating may be limited, so registrations will be on a first come, first serve basis.

<b>Seminar Date:</b> October 17, 2014	<b>Seminar Time:</b> 7:00 a.m. to 5:30 p.m. Friday	<b>Location:</b> Sheraton North Houston 15700 John F. Kennedy Blvd Houston, TX 77032 Phone: 281.442.5100	<b>Tuition:</b> \$250 /per person (early bird, ends 9/3) \$300 /per person <b>CEU Credits:</b> 7.5 CEUs
--	---	--	--

### Seminar Topics:

p2. **Reading Hardy Cross and Effective Design**

*Mr. Mike West, A.I.A., P.E., F. AISC  
(Keynote Speaker)*

p2. **Code Updates**

*Dr. Lee Shoemaker, Ph.D., P.E., F. SEI*

p3. **Nuclear Power at NCI**

*Jerry Adamski, P.E.*

p3. **Hard Wall Connections**

*Dr. Justin Marshall, Ph.D., P.E.*

p3. **AISC Design Guide 16 Connections**

*Dr. Matt Eatherton, Ph.D., P.E.*

p4. **FEMA P695 Analysis**

*Dr. Vahid Meimand, Ph.D., P.E.*

p4. **ASTM 1085 HSS**

*Mr. Brad Fletcher, S.E.*

## 2014 Officers and Directors

Office	Name	Phone	E-mail (click to send)
President	Steve Wilkerson	832.969.8641	<a href="mailto:steve@ziasoftware.com">steve@ziasoftware</a>
Vice President	Al Bustamante	832.467.2177	<a href="mailto:abustamante@wje.com">abustamante@wje.com</a>
Secretary	Tan Tran	713.868.1591	<a href="mailto:tan.tran@cardno.com">tan.tran@cardno.com</a>
Treasurer	Jonathan Warshaw	832.467.2177	<a href="mailto:jwarshaw@wje.com">jwarshaw@wje.com</a>
Past President	Damon Brotherton	713.702.9973	<a href="mailto:d-brotherton@sbcglobal.net">d-brotherton@sbcglobal.net</a>
Chapter Director (13-14)	Bob Lanser	713.670.2468	<a href="mailto:rlanser@poha.com">rlanser@poha.com</a>
Chapter Director (14-15)	Larry Ickert	832.244.5403	<a href="mailto:lickert@excelmidstream.com">lickert@excelmidstream.com</a>
State Director (12-13)	Dennis Paul	281.584.9300	<a href="mailto:dpaul@paulengineering.com">dpaul@paulengineering.com</a>
State Director (14-15)	Damon Brotherton	713.702.9973	<a href="mailto:d-brotherton@sbcglobal.net">d-brotherton@sbcglobal.net</a>
Alternate State Director	Joe Kallaby	281.584.9300	<a href="mailto:osi-jk@swbell.net">osi-jk@swbell.net</a>

## 2014 Committee Chairpersons

Committee	Chair	Phone	E-mail (click to send)
Advisory	Jaynool Khayrattee	713.664.0130	<a href="mailto:jayk@matrixstructural.com">jayk@matrixstructural.com</a>
Scholarship	Paul Gugenheim	832.309.5584	<a href="mailto:paul@fiberwrap.com">paul@fiberwrap.com</a>
Membership	Glen Smith	713.664.0130	<a href="mailto:glen.smith@gmail.com">glen.smith@gmail.com</a>
Program			
Student Affairs– TAMU	Stefan Hurlebaus	979.845.9570	<a href="mailto:shurlebaus@civil.tamu.edu">shurlebaus@civil.tamu.edu</a>
Student Affairs– Rice U.	Jamie Padgett	713.348.2325	<a href="mailto:Jamie.Padgett@rice.edu">Jamie.Padgett@rice.edu</a>
Student Affairs– U of H	Mina Dawood	713.743.2983	<a href="mailto:nmdawood@uh.edu">nmdawood@uh.edu</a>
Publicity	Lance Operhall		<a href="mailto:operhall@gmail.com">operhall@gmail.com</a>
Young Engineers	Chris Hill	713.868.1591	<a href="mailto:chris.hill@cardno.com">chris.hill@cardno.com</a>
Advertising	Chris Hill	713.868.1591	<a href="mailto:chris.hill@cardno.com">chris.hill@cardno.com</a>
Newsletter Editor	Jennifer Ju	713.868.1591	<a href="mailto:jennifer.ju@cardno.com">jennifer.ju@cardno.com</a>
TAMU Student Ch. Pres.	Kimberly Lyons	575.518.8256	<a href="mailto:klyons@neo.tamu.edu">klyons@neo.tamu.edu</a>