American Society of Civil Engineers Structural Engineering Institute Technical Committee on Optimal Structural Design

Meeting Minutes - Unapproved 2008 ASCE-SEI Structures Congress Hyatt Regency – Vancouver, BC, Canada Cavendish Room Wednesday, April 23, 2008

#### Members in Attendance

Chris Foley (Chair, Ctrl. Mem.) Shahram Pezeshk (Ctrl. Mem.) Keith Mueller (Ctrl. Mem.) Asghar Bhatti (Ctrl. Mem.) Dan Frangopol Michael Gustafson John Peronto Farzin Zareian James Guest

#### Visitors (and Friends)

Don Grierson (TAC Past Chair) Satish Nagarajaiah Makoto Ohsaki David Schmueser Bulent N. Alemdar Marquette University University of Memphis Teng and Associates University of Iowa Lehigh University Tekla Thornton-Tomasetti Univ. California – Irvine Johns Hopkins University

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University of Waterloo Rice University Kyoto University Altair Engineering Bentley Systems, Inc. grierson@uwaterloo.edu nagarajaiah@rice.edu ohsaki@archi.kyoto-u.ac.jp d.schmeuser@altair.com bulent.alemdar@bentley.com

The meeting was called to order at 5:10 pm.

#### 1. Introductions (Members, Friends, Guests)

Members of the committee, guests and friends provided brief introductions.

#### 2. Approval of Minutes from 2007 Meeting in Long Beach, CA

The minutes of the annual meeting at the Long Beach congress were approved without amendment. A copy of the meeting minutes of the 2007 meeting are enclosed with these minutes.

#### 3. Review and Update of Membership Roster

The membership roster was reviewed. The following was noted with regard to member status:

- The committee currently has 21 members.
- There is a much larger presence of practitioners on the committee than in years past (4 total: software firms, consulting firms).
- The terms of Keith Mueller and Vlasis Koumousis will expire at the end of September 2008. Keith will be approached by the chair to evaluate his interest in extending his term on the committee for another three years. Dr. Mueller is currently a control member of the committee.
- Sept 2009 will have a relatively heavy number of member terms expiring (7 total). The chair requested that all members contact colleagues and ask presenters at this year's congress with interest in structural optimization to join the committee.

- The office of secretary remains unfilled and the chair will contact Dr. Alimoradi to verify his interest and ability to remain secretary of the committee. In the interim, the chair requested that committee members email him if they are interested in becoming secretary of the committee.
- The chair also informed the committee that his term is up in Sept 2009 and he requested that members interested in becoming chair of the OSD committee contact him. The current chair served his 6-year term on the committee and also received a 3-year extension to become chair. ASCE-SEI bylaws require that he become a friend of the committee.
- The Journal of Structural Engineering Associate Editor position term ends in Sept 2009 as well. The chair will contact Professor Swan regarding a succession plan for his replacement and smooth transition out of the AE position.

The updated roster for the Optimal Structural Design Technical Committee is included with these minutes.

#### Action Item:

Three individuals at the committee meeting were not currently members: Dr. Alemdar, Dr. Schmeuser, and Dr. Ohsaki. The Chair will contact these individuals and request that they consider joining the committee. The Chair will also contact Dr. Ganzerli again to explore her interest in joining the committee's activities.

#### 4. Associate Editor's Report

The time period for which the associate editor report is being filed is: May 1, 2007 through April 28, 2008. The OSD AE handled 18 manuscripts during this time period:

New Manuscripts – 11 0 – accepted 3 – recommended revision 5 – declined 3 – in review Resubmissions – 7 1 – accepted 3 – declined 3 – in review

The OSD committee wishes to express sincere gratitude to Prof. Swan for his excellent work during the past year handling manuscripts for the Journal. Performing the duties of AE is time consuming and Prof. Swan has done a terrific job.

#### 5. Report on Sessions at the 2008 Structures Congress and 18th A&C Specialty Conference.

Two OSD members were heavily involved in the planning and execution of the 18th A&C Specialty Conference (Bhatti and Foley).

The OSD Committee sponsored one session in the general congress: *Pushing the Envelope in Material and Structural System Choice in High-Rise Buildings* Organized by Keith Mueller – Teng and Associates

The OSD Committee co-sponsored two sessions with the Emerging Computing Technical Committee:
 Advances in Software Development for Structural Engineering Applications
 Organized by Michael Scott – Oregon State University
 System Performance Optimization – Minimizing Annual Loss, Minimizing Life-Cycle Costs, and
 Maximizing Performance Reliability
 Organized by Christopher M. Foley – Marquette University

An excerpt from the conference program that outlines the sessions and the papers presented is enclosed with these minutes.

#### 6. Review of OSD Product Tracking Sheet

The OSD committee's contribution to the Analysis & Computation TAC product tracking sheet was reviewed with the committee. The Chair reminded members to keep him abreast of committee-related or associated activities that they have undertaken in the past year so that he may update the product tracking sheet on a regular basis.

The updated product tracking sheet information for the OSD committee is enclosed with these minutes. Updates for the 2007 meeting are indicated in red.

#### 7. 2009 Structures Congress in Austin, TX

The Call for Papers for the 2008 Congress (enclosed with these minutes) and the conference submission/notification deadlines were reviewed.

There was discussion regarding how sessions and papers go through the approval process and the time lag between session acceptance and session approval. Professor Zareian walked the committee through the process that he undertook to put together a session and other committee members (Mueller and Foley) relayed their experiences to the committee.

It was recommended that committee members submit their ideas for session proposals (including paper titles, author names and brief abstracts) first. These will then be added to the submission tracking system and the session proposer would be notified that the author abstracts can be uploaded to the session through the conference website. The sessions are accepted or rejected after all author abstracts are uploaded and the session is complete in the system.

The idea of not printing papers in the proceedings unless a paper is presented at the congress was discussed. In general, the committee felt that this was a viable option to encourage authors to both submit papers to, and attend the congress.

The Committee was reminded to plan sessions as soon as possible and to notify the committee chair of their intent to submit OSD-sponsored sessions. The Chair can then ensure that proper crediting of sessions at the conference can be accomplished. The committee felt that there were no issues with proper crediting of committee sponsored and co-sponsored sessions at the 2008 congress and the 18th A&C specialty conference.

#### 8. Technical Presentations

Two presentations on topology and shape optimization were made during the meeting.

Presentation 1 – Dr. David Schmueser, Altair Engineering Computer Aided Engineering Design Concepts: Topological, Shape, and Size Optimization With HyperWorks 8.0

Presentation 2 – Professor James Guest, Johns Hopkins University Structural Topology Optimization at Johns Hopkins University Dr. Schmeuser's presentation covered the shape and topology optimization capabilities of Altair Engineering's HyperWorks commercial software system. Professor Guest outlined several research efforts that have recently been undertaken by the group at Johns Hopkins University.

The presentations were very well received and it is recommended that these presentations become a regular activity at OSD meetings.

#### 9. Items for Discussion and Other Business

The chair outlined the current state of the OSD web-site. A PDF file illustrating the OSD web presence was distributed to the committee (enclosed with these minutes). The chair asked for a volunteer web master to maintain information delivery through the OSD website. Dr. Guest volunteered his services as webmaster for the committee's activities.

The structural optimization Wiki put together by Dr. Alimoradi was also reviewed. Dr. Alimoradi was congratulated on putting together the Wiki and the committee will make sure to contribute as they see fit and to the extent they feel comfortable. A screen capture from the Wiki is included with these minutes.

The Structural Engineering Institute achievement and paper awards and their criteria were reviewed by the chair. The criteria for these awards are included with these minutes. The chair recommended that if a member feels a colleague or manuscript is worthy of nomination for any of the ASCE-SEI award, they should contact the chair so that a small ad-hoc committee can assemble a nomination package for the Executive Committee.

A recent email sent from Jim Rossberg to committee chairs (enclosed with these minutes) was reviewed with the committee. Committee members were encouraged to not only attend the committee meetings, but the congress as well.

Action Item:

The chair will distributed all OSD committee information to Dr. Guest and a transition of the web server off of the Marquette University server will take place.

The meeting was adjourned at 7:30 pm.

Respectively Submitted,

Ogl M. H

Christopher M. Foley, Ph.D., P.E. Chair – Technical Committee on Optimal Structural Design Secretary Pro Tempore April 28, 2008

Encl. Approved 2007 Meeting Minutes – Long Beach, CA. Updated OSD Membership Roster Conference Program Excerpt with OSD Sponsored and Co-Sponsored Sessions. OSD Product Tracking Sheet Updates dated March 2008 2008 Austin Structures Congress Call for Papers Reviewed During Meeting OSD Committee Website Screen Shot Structural Optimization Wiki Site Achievement and Paper Award Announcements Jim Rossberg's Email Regarding Congress/Committee Attendance and Registration Concerns

#### American Society of Civil Engineers Structural Engineering Institute Technical Committee on Optimal Structural Design

Meeting Minutes Westin Hotel – Long Beach, CA Alamitos Room Thursday, May 17, 2007 1:00 – 3:00 pm

#### Members in Attendance

Chris Foley (Chair, Ctrl. Mem.)	Marquette University	chris.foley@marquette.edu
Shahram Pezeshk (Past-Chair, Ctrl. Mem.)	University of Memphis	spezesk@memphis.edu
Keith Mueller (Ctrl. Mem.)	Teng and Associates	muellerkm@teng.com
Asghar Bhatti	University of Iowa	mabhatti@uiowa.edu
Dan Frangopol	Lehigh University	dan.frangopol@lehigh.edu
Masoud Sanayei	Tufts University	masoud.sanayei@tufts.edu
Michael Gustafson	Tekla	michael.gustafson@tekla.com
Michael Scott	Oregon State University	michael.scott@oregonstate.edu
John Peronto	Thornton-Tomasetti	JPeronto@ThorntonTomasetti.com
Arzhang Alimoradi	John Martin & Associates	arzhang@johnmartin.com
Visitors (and Friends)		

Don Grierson (TAC Chair)

University of Waterloo

grierson@uwaterloo.edu

- 1. The meeting was called to order at 1:10 pm.
- 2. Introductions (Members, Friends, Guests)
- 3. Approval of Minutes from 2006 Meeting in St. Louis

Professor Grierson pointed out the dual listing of Professor Frangopol as a friend and member. The minutes will be corrected to indicate that Professor Frangopol is a member of the committee. The minutes were approved as amended. Approved minutes for the 2006 meeting are included with these minutes.

4. Review and Update of Membership Roster

The current roster for the committee was distributed via email to the members prior to the meeting and was reviewed. Prof. Otani emailed the chair prior to the meeting and indicated that he was not a member of the committee and desires removal from the roster. He has been removed from the committee roster. An updated roster is enclosed with these minutes.

The committee discussed the election of Dr. Arzhang Alimoradi as Secretary of the committee. It was recommended that Dr. Alimoradi become Secretary and that he also becomes a control member of the committee.

The number of control members for the committee was discussed. The committee currently has 4 control members (Foley, Pezeshk, Swan, and Mueller). Increasing this to 6 individuals was discussed. Prof. Pezeshk will be removed as control member of the committee. The control members for the coming year are: Alimoradi (Secretary), Foley (Chair), Mueller, and Swan (AE).

5. Associate Editors Report

The time period for which the associate editor report is being filed is: June 1st 2006 through May 17, 2007. The OSD AE handled 14 manuscripts during this time period:

- 4 manuscripts were declined outright;
- 4 manuscripts required revisions with re-review;
  - of these, three have not yet been re-submitted
  - of these, one was resubmitted and accepted for publication
- 4 were recommended for acceptance on the first submission
- 2 are currently in the review process.

Therefore, 9 manuscripts have completed the review process (4 were rejected and 5 accepted). 2 are still in review, and 3 are awaiting resubmission for re-review.

The OSD committee wishes to express sincere gratitude to Prof. Swan for his excellent work during the past year handling manuscripts for the Journal. Performing the duties of AE is time consuming and Prof. Swan has done a terrific job.

6. Report on Sessions at the 2007 Structures Congress in Long Beach.

The OSD committee did not propose any sessions at the 2007 congress.

The committee discussed anomalies encountered with assigning moderators to sessions; and the congress submission process. It appears that sessions proposed for the congress had moderators assigned by the local organizing committee and there was concern that record of the committee organizing and developing the session would be lost if this practice continued. In fact, it was very, very difficult to track which committee or individual organized a session at the congress by looking at the program. The Committee recommended that committees and individuals proposing and organizing sessions are properly tracked so that accurate product tracking sheets can be maintained.

7. OSD Committee Website

The OSD committee website was discussed. No action with regard to its maintenance was taken at this point. The chair (Foley) will work with Prof. Scott to develop a Wiki site for the committee. This Wiki would replace the committee's web site and would facilitate more effective editing and updating by all committee members.

8. Review of OSD Product Tracking Sheet

The committee product tracking sheet (Dec 2006) was distributed, reviewed and discussed by the committee. The Dec. 2006 tracking sheet is enclosed with these minutes. The chair stressed the importance for members of the committee to keep him informed of their activities so that accurate product tracking sheets can be generated.

The committee discussed the monograph or special publication on *Performance-Based Optimization* that was begun during the last year. Professors Foley and Pezeshk will discuss the future of this effort and will update the committee at the 2008 congress.

9. 2008 Structures Congress and 18<sup>th</sup> Analysis and Computation Specialty Conference in Vancouver, Canada.

The 2008 Structures Congress and 18<sup>th</sup> A&C Specialty Conference were discussed. The chair distributed the call for papers (enclosed with these minutes) for the 2008 congress and the special issue (or portion) of the *Journal of Structural Engineering* devoted to papers based upon presentations to be made at the congress was discussed.

The committee discussed the theme areas for the conference and brainstormed session topics. This discussion resulted in the committee deciding to propose four sessions for the 2008 Congress and 18<sup>th</sup> A&C specialty conference. The tentative titles for these sessions are listed below:

- Structural Optimization in the Design Office Theory and Implementation
- Application of Structural Optimization Methodologies in OpenSEES
- Merging Structural Optimization Algorithms and Commercial Software
- Seismic Performance Optimization Minimizing Annual Loss and Maximizing Performance Reliability

Committee members were informed of the June 15, 2007 session submission deadline and are working toward putting together these sessions by that time.

10. Brief Review of European Conferences

Two European conferences of interest to the committee members were discussed. The Chair distributed information on the following conferences to the committee (enclosed):

- COMPDYN 2007 Conference in Crete, June 2007
- 8<sup>th</sup> World Congress on Computational Mechanics (WCCM8) in Venice, June 2008
- First International Symposium on Life-Cycle Civil Engineering (IALCCE 08) in Varenna, Italy

Several committee members have planning roles in these events and brochures, calls for papers, and minisymposia announcements describing these activities are included with these minutes. Committee member activities in conferences outside North America were encouraged to foster world-wide collaborative efforts.

11. General Items for Discussion

A discussion of special issues in the *Journal of Bridge Engineering* or the *Journal of Computing in Civil Engineering* related to structural optimization was initiated by Prof. Scott. The committee recognizes that these ASCE journals are also likely outlets for committee products and submissions will be investigated.

Respectively Submitted,

Ogl M. H

Christopher M. Foley, Ph.D., P.E. Chair – Technical Committee on Optimal Structural Design May 21, 2007

 Encl: Approved Minutes of 2006 OSD Meeting in St. Louis Updated 2007-08 OSD Committee Roster OSD Product Tracking Sheet – Dec. 2006 Call for Papers – 2008 Structures Congress Miscellaneous European Conference Calls, Mini-Symposia Calls

ASCE-SEI Optimal Structural Design – Minutes (unapproved) Long Beach, CA May 17, 2007

## ASCE-SEI Technical Committee on Optimal Design April 27, 2008

Title	First Name	Last Name	Email Address	Company Name	State	Start Term	End Term	Control Group
Secretary	v Arzhang	Alimoradi	arzhang@johnmartin.com	John Martin Associates, Inc.	CA	20051000	20110900	4
	Asghar	Bhatti	mabhatti@uiowa.edu	Univ of Iowa	IA	20061000	20120900	4
	Brenner	Brian	brian.brenner@tufts.edu	Tufts University	MA	20031000	20090900	
	Scott	Burns	asce@scottburns.us	Univ Of Illinois	IL	20031000	20090900	
Chair	Christopher	Foley	chris.foley@marquette.edu	Marquette University	WI	20061000	20090900	4
	Dan	Frangopol	dan.frangopol@lehigh.edu	Lehigh Univ	PA	20031000	20090900	
	Yanglin	Gong	yanglin.gong@lakeheadu.ca	Lakehead University	ON	20041000	20100900	
	James	Guest	jkguest@jhu.edu	Johns Hopkins Univ	MD	20061000	20120900	
	Michael	Gustafson	michael.gustafson@tekla.com	TEKLA	GA	20061000	20130900	
	Vlasis	Koumousis	vkoum@central.ntua.gr	Technical University of Athens	-	20021000	20080900	
	Kang	Lee	kslnist@chonnam.ac.kr	Chonnam National University	-	20031000	20090900	
	Qing	Liang	liang@usq.edu.au	The University of Southern Queensland	-	20031000	20090900	
	Keith	Mueller	muellerkm@teng.com	Teng and Associates	IL	20021000	20080900	4
	John	Peronto	JPeronto@ThorntonTomasetti.com	Thornton Tomassetti - Chicago	IL	20061000	20130900	
Past-Chair	Shahram	Pezeshk	spezeshk@memphis.edu	Univ Of Memphis	ΤN	20061000	20090900	4
	Anne	Raich	raicha@lafayette.edu	Lafayette College	ТΧ	20041000	20100900	
	Masoud	Sayanei	masoud.sanayei@tufts.edu	Tufts Univ	MA	20061000	20120900	
	Benjamin	Schafer	schafer@jhu.edu	Johns Hopkins Univ	MD	20041000	20100900	
	Michael	Scott	michael.scott@oregonstate.edu	Oregon State University	OR	20061000	20120900	
AE-JSE	Colby	Swan	colby-swan@uiowa.edu	Univ Of Iowa	IA	20061000	20120900	4

### 2008 STRUCTURES CONGRESS TECHNICAL PROGRAM

#### CONCURRENT TECHNICAL SESSION

#### FRIDAY, APRIL 25, 2008

8:30 - 10:00 AM LOCATION: PLAZA B

## Pushing the Envelope in Material and Structural System Choice in High-Rise Buildings

SPONSORING COMMITTEE: Optimal Structural Design

#### TRACK: BUILDINGS II

TRACK SPONSORED BY: 🛛 🖽

The Singeone Group of Companies

TRACK CHAIRS: George De Ridder, P.E., FIStructE, Associated Engineering & Robert Smith, P.E., Smith & Co. Ltd.

MODERATOR: Keith M. Mueller, A.M.ASCE, Teng and Associates, Inc.

#### **One Rincon Hill: Raising the Bar**

Ron Klemencic, John D. Hooper, Ola J. Johansson, Magnusson Klemencic Associates, Seattle, WA

#### Specifying High-Performance Concrete for the Trump Tower Chicago

William F. Baker, Stan Korista, Dane S. Rankin, Skidmore, Owings & Merrill LLP, Chicago, IL; Robert C. Sinn, Formally of Skidmore, Owings & Merrill LLP, Chicago, IL

#### Waterview Tower: Finding the Right High-Strength Concrete Mix

Keith Mueller, R. Shankar Nair, Thomas Suarez, Todd Ude, Teng & Associates, Inc., Chicago, IL CONCURRENT TECHNICAL SESSION

## FRIDAY, APRIL 25, 2008

8:30 - 10:00 AM

**LOCATION: REGENCY E** 

### **18TH A&C SPECIALTY CONFERENCE**

## Advances in Software Development for Structural Engineering Applications

SPONSORING COMMITTEE: Optimal Structural Design and Emerging Computing Technology

#### TRACK: 18TH A&C SPECIALTY CONFERENCE I

TRACK CHAIRS: M. Asghar Bhatti, Ph.D., P.E., University of Iowa & Christopher M. Foley, Ph.D., P.E., Marquette University

MODERATOR: Michael H. Scott, Ph.D., A.M.ASCE, Oregon State University

A New Parallel Structural Analysis Framework Ammar Al-Sayegh, Kuwait University, Safat, Kuwait; Elisa D. Sotelino, Virginia Tech, Blacksburg, VA

Extensions of OpenSees for Bridge Management Applications Michael H. Scott, Ph.D., Oregon State University, Corvallis, OR

Implementation of Building Information Modeling (BIM) on the Renovation of the Art Gallery of Alberta in Edmonton, AB Derrick D. Roorda, Mei Kuen Liu, DeSimone Consulting Engineers, San Francisco, CA

Nonlinear Structural Analysis Using Software Design Patterns

Frank McKenna, University of California Berkeley, Berkeley, CA; Michael H. Scott, Ph.D., Oregon State University, Corvallis, OR; Gregory L. Fenves, University of California Berkeley, Berkeley, CA

#### CONCURRENT TECHNICAL SESSION

## SATURDAY, APRIL 26, 2008

8:30 - 10:00 AM LOCATION: REGENCY E

## System Performance Optimization – Minimizing Annual Loss, Minimizing Life-Cycle Costs, and Maximizing Performance Reliability

SPONSORING COMMITTEES: Optimal Structural Design and Emerging Computing Technology

#### TRACK: 18TH A&C SPECIALTY CONFERENCE I

TRACK CHAIRS: M. Asghar Bhatti, Ph.D., P.E., University of Iowa & Christopher M. Foley, Ph.D., P.E., Marquette University

MODERATOR: Christopher M. Foley, Ph.D., P.E., Marquette University

#### Structural Performance Optimization with Conflicting Objectives under Uncertainty

Dan M. Frangopol, Lehigh University, Bethlehem, PA; Luis C. Neves, New University of Lisbon, Caparica, Portugal

#### Optimization of Multiple Shape Memory Alloy Devices by a Genetic Algorithm for Seismic Response of a Tall Structure

Osman E. Ozbulut, Paul N. Roschke, Texas A&M University, College Station, TX

## Evaluation of Seismic Energy in Inelastic Structures with Rigid-End Offsets

Kevin Wong, Ph.D., Ruifen Liu, University of Utah, Salt Lake City, UT

#### Automated Risk-Based Seismic Design Method for Optimal Structural and Non-Structural System Performance

Hugo A. Rojas, Shahram Pezeshk, University of Memphis, Memphis, TN; Christopher M. Foley, Ph.D., P.E., Marquette University, Milwaukee, WI

## Analysis & Computation Technical Administration Committee (TAC) Product Tracking Sheet Updated June, 2007

COMMITTEE NAME	PURPOSE STATEMENT	PUBLICATIONS	SESSIONS	JOURNAL ARTICLES	OTHER	NEW PROJECTS UNDER DISCUSSION
ANALYSIS & COMPUTATION TAC Donald Grierson <u>grierson@uwaterloo.ca</u> 519-888-4567(32412)	To report, encourage development of, and evaluate innovative methods of structural analysis; to foster use of digital computers and other modern computing devices to obtain more effective analyses and improved designs; to encourage the development and reporting of innovations in the use of computers that may have practical significance; to report on professional problems involving multi-disciplinary use of computers; and to organize the biannual Analysis & Computation Specialty Conference in conjunction with the ASCE Structures Congress.	A manuscript on <i>"Performance Based</i> <i>Optimal Design"</i> will be published in 2007 by the Optimal Structural Design Technical Committee (see below)	<ul> <li>2006 Structures Congress 7 technical sessions were organized for the 17<sup>th</sup> A&amp;C Specialty Conference (see below)</li> <li>2007 Structures Congress 7 technical sessions were proposed, of which 3 were declined;, and 4 were presented at the congress.</li> <li>2008 Structures Congress Up to two tracks of technical sessions will be organized for the 18<sup>th</sup> A&amp;C Specialty Conference to be held in conjunction with the 2008 Structures Congress in Vancouver, April 24-26</li> </ul>	<ul> <li>4 journal articles related to the work of A&amp;C Technical Committees were published in 2006 (see below)</li> <li>Expanded versions of a select number of papers presented at the 17<sup>th</sup> Analysis &amp; Computation Specialty Conference, held in conjunction with the 2006 Structures Congress, will be published in a 2007 Special Issue of the Journal of Structural Engineering dedicated to the conference (see Methods of Analysis Technical Committee below)</li> </ul>	Organized the 17 <sup>th</sup> Analysis & Computation Specialty Conference held in conjunction with the ASCE-SEI 2006 Structures Congress in St. Louis, May 18-21. Planning has begun for the 18 <sup>th</sup> Analysis & Computation Specialty Conference to be held in conjunction with the ASCE-SEI 2008 Structures Congress in Vancouver, April 24-26.	Organization of the 18 <sup>th</sup> Analysis & Computation Specialty Conference, to be held in conjunction with the ASCE-SEI 2008 Structures Congress, Vancouver, Canada
EMERGING COMPUTING TECHNOLOGY Abhinav Gupta agupta1@ncsu.edu 919-858-5733	To provide a mechanism by which various emerging computing technologies that may be applicable to some part of the structural engineering process can be identified and brought to the attention of the structural engineering community; these technologies include parallel and distributed computing; database and information systems; web- based and collaboration technologies; artificial intelligence; field based computing and automation; hybrid simulations of structural systems and related computing and information technologies; and structural monitoring involving the design of sensor networks and utilization of data from such networks to detect changes in structural health. New topics of interest that represent "Emerging Computing" theme include: (a) Multi- scale modeling, (b) Computational geometry, (c) NEESit and distributed hybrid simulation and testing, and (d)		<ul> <li>2007 Structures Congress</li> <li>2 sessions held on topics:</li> <li>(a) NEES: Hybrid Simulation</li> <li>Seismic Evaluation of Large- Scale Structural Systems, and (b) NEES: Emerging IT in Earthquake Engineering</li> <li>2008 Structures Congress, 18<sup>th</sup> A&amp;C Specialty</li> <li>Conference</li> <li>Four sessions being planned on topics related to: (a)</li> <li>Validation and Verification for Hybrid Simulation, (b)</li> <li>Software Advances in</li> <li>Structural Engineering, (c)</li> <li>Computational Aspects in Internet-enabled Distance</li> <li>Learning, and (d) Plenary</li> <li>session for 18<sup>th</sup> A&amp;C</li> <li>Specialty Conference</li> </ul>	The special issue of Journal of Structural Engineering related to 17 <sup>th</sup> A&C Specialty conference will have 2 papers from this committee.	Committee chair is a member of the organizing committee for the 18th Analysis and Computation Conference, Vancouver, 2007 It is proposed that one member of the committee (possibly the AE) serve as the guest co-editor of the special issue for 18 <sup>th</sup> A&C Specialty Conference	Based on the suggestion of EXCOM, the committee is planning to invite papers related to Building Information Management in the 18 <sup>th</sup> A&C Specialty Conference, 2008. The Committee is also in the process of recruiting more non- academic members as per the suggestion of EXCOM.

	<b>Visualization</b>				
STRUCTURAL CONTROL Michael Symans <u>symans@rpi.edu</u> 518-276-6938	The committee enrolls in integrating and interfacing the discipline of structural control with the applications and specialties of civil engineering problems. Emphasis will be placed on the computing technology for the development, application and modification of active/hybrid control to achieve design intelligence of civil engineering structures. NOTE: The following revisions to the committee name, purpose, and objective were proposed and approved by the membership at the 2006 Structures Congress. The Chair made a formal request for these changes to the A&C TAC Chair and EXCOM. There were concerns about the proposed changes and thus these changes were revisited at the 2007 SC Committee meeting. Based on the discussion at this meeting, the Control Group will make a final recommendation to the A&C TAC Chair and EXCOM Rep. <i>Name:</i> Structural Control, Damping, and Seismic Isolation <i>Purpose:</i> The committee seeks to promote and foster research and implementation of structural control, damping, and seismic isolation systems for application to civil engineering structures. <i>Objective:</i> The committee will work to elevate the state-of-the-art and practice of structural control, damping, and seismic isolation systems by serving as a primary resource for establishing broad consensus on issues of relevance to the committee, identifying and prioritizing research needs, and developing and supporting programs for education and technology transfer.	<ul> <li>2007 SPIE Smart Structures Conference 5 sessions organized (2 on structural control; 1 on sensors; 2 on health monitoring)</li> <li>2007 Structures Congress 3 sessions proposed (1 approved on base-isolated structures; 2 declined)</li> <li>2007 Engineering Mechanics Conference 1 session organized on hybrid testing</li> <li>2007 American Cont. Conf. 1 session on control of large- scale structures has been accepted.</li> <li>2007 World Forum on Smart Materials and Smart Structures Technology 1 session organized on Educating the Next- Generation of Engineers on Smart Structures Technology.</li> </ul>	Special Issue of Journal of Structural Control and Health Monitoring "Smart Base Isolation Benchmark Problem" devoted to phase I of this problem. Start 2004, End 2006 (published in 2006). COMPLETED A special issue of the Journal of Structural Control and Health Monitoring is under development for phase II of the smart base isolation benchmark problem. Manuscripts are currently under review with an expected publication date of late 2007/early 2008. A request has been made to the Journal of Structural Control and Health Monitoring for a special issue that covers both Phases I and II of the Seismic Highway Bridge Control Problem. If the request is approved, a call for papers will be issued with manuscripts due in Fall 2007.	Committee chair was a member of the organizing committee for the 17th Analysis and Computation Conference, St. Louis, 2006 The committee had a goal of conveying to the profession the accomplishments of research in structural control and of describing the relevance of these accomplishments to the professional engineer. This goal was satisfied by helping to organize the plenary session at the 17 <sup>th</sup> A&C Specialty Conference. The session focused on the topic of structure control and featured two world-renowned speakers (Prof. Bill Spencer and Dr. Charles Kircher). The committee was involved in soliciting these speakers. Start: 2003, End 2006. COMPLETED	The committee had a goal of conveying to the profession the accomplishments of research in structural control and of describing the relevance of these accomplishments to the professional engineer. This goal was satisfied by helping to organize the plenary session at the 17 <sup>th</sup> A&C Specialty Conference. The session focused on the topic of structure control and featured two world-renowned speakers (Prof. Bill Spencer and Dr. Charles Kircher). The committee was involved in soliciting these speakers. Start: 2003, End 2006. COMPLETED To further improve the awareness of structural control among practicing engineers, the committee had been planning to develop an article for publication in a professional engineering magazine that would highlight recent full- scale implementations of structural control systems and would discuss the impacts of the benchmark problems. Instead of the article, the committee plans to organize a session

					at the 18 <sup>th</sup> A&C Specialty Conference that focuses on an assessment of the benchmark problems (what has been learned? what has been the impact of these problems? where do we go from here?). Start: 2006, End 2008.
METHODS OF ANALYSIS Finley Charney fcharney@vt.edu 540-231-1444	The role of the Methods of Analysis committee is to report and evaluate new methods of structural analysis that are produced by academia and by private practice. One of the main goals of the committee is to promote, through continuing education, the responsible use of these advanced analysis tools. The Mission Statement for the committee is as follows: 1) To review new and existing methods of structural analysis, and to provide information on the safe and efficient application of these methods within the structural engineering and design profession and within the academic research environment, 2) To evaluate the current university curricula and teaching methodologies for structural analysis, and to improve the content and delivery of this material.	<ul> <li>2007 Structures Congress A session on wind drift serviceability analysis was presented at the 2007 Congress in Long Beach California. The session was very well attended, and received positive comments from the audience.</li> <li>2008 Structures Congress Two sessions will be proposed. One will be a panel session on "Teaching Structural Analysis", where panelists from practice and academia will discuss the concepts of teaching analysis at the undergraduate and graduate level. The second session, "Concepts in Teaching Advacned Structural Analysis" will be a paper session that concentrates on the use of software like MathCad, Matlab, and commercial products like SAP2000 in advanced analysis courses.</li> </ul>	2007 Special Issue of Journal of Structural Engineering The chair is serving as the Associate Editor responsible for the a Special Issue of the JSE that contains a selection of (expanded) papers from the 17th A&C Specialty Conference. Twelve such papers were submitted and are in various states of review. It is expected that the special issue can be published in early 2008.	Committee chair was a principle member of the steering committee for the 17th Analysis and Computation Specialty Conference, St. Louis, 2006, and is a member of the steering committee for the 18th A&C to be held in Vancouver in 2008.	A publication on methods for performing drift serviceability analysis is in preparation. This publication, targeted for the <i>Structural</i> <i>Engineering Practice</i> <i>Periodical</i> , will be a joint venture with the Committee on the Design of Steel Building Structures.
OPTIMAL STRUCTURAL DESIGN Christopher M. Foley chris.foley@marquette.edu 414-288-5741	Further the development of the state- of- the art of optimal design of structures. The committee shall encourage and disseminate new developments in practical applications to structural design, and new computation techniques, methodology and algorithms	Structures Congress 2008 and 18 <sup>th</sup> A&C Conference The chair of the OSD committee (Foley) and control member (Bhatti) are co-chairs of the 18th A&C conference. There were three sessions co- sponsored or sponsored by the OSD committee. The following session was sponsored by the OSD	<ul> <li>Rojas, H., Pezeshk, S., Foley,</li> <li>C.M. (2007) "Performance- Based Optimization</li> <li>Considering Both Structural and Nonstructural</li> <li>Components", <i>Earthquake</i> <i>Spectra</i>, Earthquake</li> <li>Engineering Research</li> <li>Institute, Vol. 23, No. 3, pp.</li> <li>685-709.</li> <li>Guest J.K. and Igusa T.</li> <li>Structural optimization</li> </ul>	Book Chapters: Foley, C.M. (2007) "Structural Optimization Using Evolutionary Computation", Chapter 3, Optimization of Structural and Mechanical Systems, Arora, J.S., Ed., World Scientific, pp. 59-120.	

•	T	
committee:	under uncertain loads and	Edited Special
(a) Pushing the Envelope in	nodal locations. Computer	Issues:
Material and Structural	Methods in Applied	Q. Q. Liang, Special
System Choice in	Mechanics and	Issue on Structural
High-Rise Buildings The following sessions were	Engineering (accepted)	Design Optimization,
co-sponsored with the ECT		Advances in Structural
committee:	Guest J.K. Imposing	Engineering, An
(a) Advances in Software	maximum length scale in	International Journal,
Development for Structural	topology optimization.	2007, Vol. 10, No. 6.
Engineering Applications	Structural and	
(b) System Performance	Multidisciplinary	Conference
<b>Optimization – Minimizing</b>	<i>Optimization</i> (in press).	Presentations:
Annual Loss, Minimizing	optimization (in press).	Guest J.K.,
Life-Cycle Costs, and		Asadpoure A., and
Maximizing Performance	Q. Q. Liang,	
Reliability	"Performance-based	Igusa T.
The OSD Chaining also	optimization: a review,"	Incorporating
The OSD Chair is also	Advances in Structural	geometric
moderating two sessions related to structural	Engineering, An	uncertainties in
engineering education:	International Journal,	structural
(a) Are We Teaching the	2007, 10(6), 739-753.	optimization,
Wrong Stuff?		Proceedings of the
(b) Contemporary Topics in		Inaugural Conference
Structural Engineering		of the Engineering
Practice and Education		Mechanics Institute,
		ASCE, Minneapolis,
The following papers will be		MN, 2008.
presented by OSD committee		
members at the 2008		Guest J.K. and Smith
Structures Congress:		L.C. Topology
Mueller, K., Nair, R.S.,		optimization of
Suarez, T., Ude, T.		continuum structures
"Waterview Tower: Finding		using HPM encoded
the Right High-Strength		genetic algorithms,
Concrete Mix", <i>Pushing the</i>		49th
Envelope in Material and		AIAA/ASME/ASCE/
System Choice in High-Rise		AHS/ASC Structures,
Buildings.		Structural Dynamics,
		and Materials
Frangopol, D.M., Neves,		
L.C., "Structural Performance		Conference
Optimization with Conflicting		Proceedings.
Objectives under Uncertainty", System		Schaumburg, IL,
Performance Optimization –		2008.
Minimizing Annual Loss,		
Minimizing Life-Cycle Costs,		Guest J.K. Reducing
and Maximizing Performance		dimensionality of
Reliability.		design variable space
		in topology
Rojas, H.R., Pezeshk, S.,		optimization.
Foley, C.M., "Automated		Proceedings of the
Risk-Based Seismic Design		7th World Congress
Method for Optimal		on Structural and
Structural and Non-Structural		Multidisciplinary
System Performance", System Performance Optimization –		Optimization, Seoul,
i erjormance Optimization –		-

	Minimizing Annual Loss,	Korea, 2007.
	Minimizing Life-Cycle Costs,	
	and Maximizing Performance	Q. Q. Liang,
	Reliability.	
	Ť	"Automated
		performance-based
		optimal design of
		continuum structures
		under multiple load
		cases", Proceedings of
		the Fifth Australasian
		Congress on Applied
		Mechanics, Brisbane,
		Australia, 2007, pp.
		671-676.
		0/1-0/0.
		Q. Q. Liang, "Effects
		of continuum design
		domains on optimal
		bracing systems for
		multistory steel
		building frameworks",
		Proceedings of the
		Fifth Australasian
		Congress on Applied
		Mechanics, Brisbane,
		Australia, 2007, pp.
		794-799.
		174-177.
		Q. Q. Liang and A. W.
		M. Ng, "Performance-
		based optimization of
		strut-and-tie models in
		reinforced concrete
		deep beams",
		Innovations in
		Structural Engineering
		and Construction,
		Proceedings of the
		Fourth International
		Structural Engineering
		and Construction
		Conference,
		Melbourne, Australia,
		2007, pp. 321-326.
		2007, pp. 527 520.
		J. H. Rong, J. H. Yi
		and Q. Q. Liang, "A
		level set method with
		maximum design
		domain limits",
1 1		
l i i		Innovations in
		Structural Engineering and

		Construction, Proceedings of the Fourth International Structural Engineering and Construction Conference, Melbourne, Australia, 2007, pp. 883-889.	
		A Wiki is currently under development and evaluation. The web address is: http://structuraloptimi zation.wikispaces.co m/	

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Upcoming Conferences

## **Call for Papers**

#### To submit an abstract, please click here.

#### How to Submit Session Requests and/or Paper Abstracts to Participate

You are invited to submit session proposals and/or paper abstracts for the 2009 STRUCTURES CONGRESS. Proposals should focus on topics consistent with the list published in this announcement. Session requests and paper abstracts should be no more than two printed pages per abstract and must be submitted through the SEI Website at www.SEInstitute.org.

SESSION REQUESTS need to include the session title and a short description of the session, name of proposed session chair and contact information (including email address), and name of the organizing/sponsoring committee (if applicable), as well as each presenter/author's name and contact information (including email address), and each paper's title. Each author/presenter in the proposed session MUST individually upload their abstract and select the proposed session as its topic (session MUST be uploaded first). Sessions organized by committees of SEI/ASCE are strongly encouraged.

PAPER ABSTRACTS must include each author's full name, credentials, affiliation, location, and contact information (including email address). Abstracts will be reviewed and should be sufficient to judge the quality and appropriateness of the work for the Congress. Any special comments, such as session, track, or topic for which the paper is best suited, should be written at the bottom of the abstract page.

EXPENSES All expenses related to preparing and presenting the papers, including camera-ready manuscripts and illustrations, are the responsibility of the authors and co-authors.

#### Format

Varied sessions are planned for the 2009 STRUCTURES CONGRESS targeted toward getting information to the practicing engineer. These sessions will cover areas that include:

- Practical design information
- Design applications in structural engineering
- Landmark bridges
- Disproportionate collapse
- Performance-based design Wind design and analysis
- Codes and standards
- Business and international engineering
- State-of-the-art research and implementation
- Enabling sustainable buildings through structural
- design

Presentations and sessions will be selected from an open call and by invitation. Presenters must provide a maximum two-page abstract. Session proposals must include a list of participants as well as a desired session format. Individual presentations and full-session abstracts will be reviewed by the National Technical Program Committee before final acceptance. Å may include but are not limited to:

- Standard moderated speaker sessions (3 to 4 speakers
- per session)
- Panel discussion sessions Poster sessions
- "Ask-the-expert" mini-seminars and workshops

#### **Suggested Technical Paper Topics**

#### Bridge & Transportation Structures

- Design Loads Bridge Design Practice
- Construction Issues
- Innovations in Structural Design Rehabilitation/Restoration
- Inspection and Maintenance
- Analysis and Material Issues
- Monitoring and Serviceability Safety of Bridges

#### **Buildings**

- Codes and Standards
- Design & Extreme Loads
- Low & High Rise Buildings
- Long Span Structures Kinetic Structures
- Construction Issues
- Practical Design
- Restoration and Repair of Existing Structures
- Structural Design Performance and Serviceability

- Performance-Based Wind Design •
- Seismic Design Issues Sustainability Issues
- Safety of Buildings

#### **Business & Professional Practice**

- Globalization
- Professional Practice & Engineering Management Law and Ethics
- HR Issues
- Licensing and Certification Project Delivery Systems • ٠
- Risk Reduction and Management

#### **Existing Structures**

- Extreme Event Loading
  Evaluation, Monitoring, Serviceability
  Historic Preservation
- Unanticipated Loads Rehabilitation and Reuse ٠
- Performanceâ€'Based Design
- Analysis and Design for All Materials •

#### International

- Business Practices across
- .
- Countries Codes and Standards
- Licensing and Regulations Low-cost Structures for •
- Developing Nations ٠
- Structural Engineering Education

#### Multi/Cross-Discipline

- Materials and Advanced
- Technology and Methods
- Architecture in Structural
- Engineering Forensic Structural Engineering
- Innovation in Construction
  Disproportionate Collapse
  Fracture & Fatigue

#### Non-Building and Special Structures

- Air-Supported & Fabric
  Industrial Structures
- Silos, Tanks, Dams Offshore Structures
- Research Advances
  - - Fundamental, Analytical, and Theoretical Advances Education
    - Experimental Research Results .
    - Health Monitoring and Sensor Networks Large Research Projects
  - New Materials and Systems

#### Codes and Standards

- Building CodesCodes Complexity and the

- Practicing Engineer Masonry and Wall Design Approaches for Different ٠
- Model Buildings Code
- Connections

#### **Proceedings**

A CD will be published to document the proceedings of the 2009 STRUCTURES CONGRESS. Authors of accepted abstracts are strongly encouraged to submit 8- to 10-page papers for inclusion in the proceedings.



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#### **Optimal Structural Design (OSD)**

#### **Technical Activities Division**

Technical Administrative Committee - Analysis and Computation

#### MISSION:

To further the development of the state-of-the-art of optimal design of structures. The Committee shall encourage and disseminate new developments in practical applications to structural design, new computation techniques, methodology and algorithms.

#### COMMITTEE ROSTER:

Christopher M. Foley	Chair
To Be Named	Secretary
Colby C. Swan	Associate Editor – Journal of Structural Engineering

#### Members:

Member Name	Company or University Affiliation	Term
Christopher M. Foley *	Marquette University	2006 to 2009
Colby C. Swan	University of Iowa	2006 to 2012
Arzhang Alimoradi	John A. Martin & Associates	2005 to 2011
Jasbir Arora	University of Iowa	2001 to 2007
M. A. Bhatti *	University of Iowa	2006 to 2012
Brian Brenner	Parsons Brinckerhoff	2003 to 2009
Scott A. Burns	University of Illinois	2003 to 2009
Siavash Khajehpour	Atomic Energy of Canada, Ltd.	2001 to 2007
Vlasis K. Koumousis	National Technical University of Athens	2002 to 2008
Qing Quan (Stephen) Liang	The University of New South Wales	2003 to 2009
Warren Lucas	Vector Structural Engineers	2001 to 2007
Keith Mueller *	Teng and Associates	2002 to 2008
Shunsuke Otani	University of Tokyo	2002 to 2008
Dan Frangopol (Past Chair)	Lehigh University	2003 to 2009
Shahram Pezeshk (Past Chair) *	The University of Memphis	2006 to 2009
Larry Sanchez	City of North Las Vegas – Building Safety	2003 to 2009
Kang Lee	Hangyang University	2003 to 2009
Ben Schafer	Johns Hopkins University	2004 to 2010
Hamid Moharrami		2004 to 2010
Anne Raich	Lafayette College	2004 to 2010
Yanglin Gong	Lakehead University	2004 to 2010
Masoud Sayanei	Tufts University	2006 to 2012
James Guest	Johns Hopkins University	2006 to 2012
Michael Scott	Oregon State University	2006 to 2012

\* - Indicates Control Member of Committee

#### Friends of the Committee:

Donald E. Grierson (Past Chair)	University of Waterloo
Mircea Iordanescu	Research Institute of Hydro-Quebec (IREQ)
Santiago Hernandez	University de Coruna
Subramaniam D Rajan	Arizona State University
Lei Xu	University of Waterloo

#### COMMITTEE ANNUAL REPORTS: Use RIGHT-CLICK "Save Target As" to download pdf file to your machine.

2005 Annual Report 2004 Annual Report 2003 Annual Report 2001 Annual Report 2000 Annual Report 1999 Annual Report

#### MEETING MINUTES: Use RIGHT-CLICK "Save Target As" to download pdf file to your machine.

2006 Meeting Minutes - Unapproved 2005 Meeting Minutes 2004 Meeting Minutes 2003 Meeting Minutes 2002 Meeting Minutes 2001 Meeting Minutes 2000 Meeting Minutes 1999 Meeting Minutes

#### 2006 STRUCTURES CONGRESS SESSIONS - St. Louis, MO:

Structural Optimization Using MS Excel for Practicing Engineers – Keith Mueller Life-Cycle Design and Management of Infrastructure – Alan Estes

#### 2005 STRUCTURES CONGRESS SESSIONS - New York, NY:

Optimal Structural Design for Practicing Engineers - Tools and Methods Available (Lucas and Mueller)

#### ASCE-OSD REPORTS AND MONOGRAPHS:

*Recent Advances in Structural Optimization*, Scott Burns (Ed.) 2005 Winner of the ASCE State-of-the-Art in Civil Engineering Award.

#### BECOME A MEMBER OF THE OSD COMMITTEE:

To become a member of the technical committee on optimal structural design, an individual must have completed their formal education (either undergraduate or graduate degrees); have a strong interest in structural optimization (either through experience, research activities, etc...); presently be (or soon become) a member of the American Society of Civil Engineers.

If you meet the above qualifications, please fill out the application form.

#### **Reading On-Line Documents:**

All documents for public viewing from this site are provided in Adobe Acrobat (pdf) format. If you would like Acrobat Reader, you can download it free from Adobe. Use **RIGHT-CLICK "Save Target As" to download pdf file** rather than trying to open pdf file on web server.

Web Page Last Updated: December 8, 2005 This website is being maintained by Christopher M. Foley.





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## Structural Optimization Wiki

Welcome to the Structural Optimization Community wiki .

and technology in the area of structural optimization, pose

problems and suggest possible solutions, and discuss

This site is mainly administrated by the members of the

Optimal Structural Design technical committee of the

Structural Engineering Institute of the American Society of

Motivation: Significance and Impact of Structural

History of Developments in Structural Optimization

Here we collect, archive, and disseminate current knowledge

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Please send comments to <u>Arzhang Alimoradi</u> and let us know if you are interested in contributing to this project. Thank you.

Last modified: March 22, 2008

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# Table of ASCE/SEI Paper Awards – Arora (April 2008) All nominations should be sent to Honors and Awards Program office at ASCE

http://www.asce.org/awards

Award	Deadline for nomination	Award Criteria
Moisseiff <i>Award for</i> <u>Paper (</u> ASCE)	Nov. 1	To an important paper published by the Society in the twelve-month period ending with June of the year preceding the year of award (or any year since the last award), dealing with the broad field of structural design, including
		applied mechanics as well as the theoretical analysis, or constructive improvement, of engineering structures such as bridges and frames, of any structural material. Papers recognized for award of other Society prizes are disqualified. In any year when the excellence of more than one paper justifies it, the prize committee may designate a "second order or merit." A paper so recognized shall be considered eligible to compete in the award for the next year. Preparation of a paper by another publisher disqualifies it from this competition.
Raymond C. Reese Research Prize <i>for <u>Paper (</u>ASCE)</i>	Nov. 1	For the paper published by the Society in the twelve-month period ending with June of the year preceding the year of the award that describes a notable achievement in research related to structural engineering and which indicates how the research can be used. The paper should include the results of research (experimental and/or analytical) and, in particular, should indicate and recommend how the research can be applied to design; it is this latter feature that is considered to be most important. No one shall be eligible to receive the Prize, or a portion of the Prize, more than once.
Norman/J. James R. Croes Medals <i>Medal for</i> <u>Papers</u>	Nov. 1	THERE IS NO DIRECT NOMINATION OF PAPERS FOR THE CROES MEDAL. SEI SHOULD NOMINATE TWO PAPERS. For contribution to engineering science. Original papers presented to the Society, provided that they have not been previously contributed in whole or in part to any other association, and have not appeared in print prior to their publication by the Society. Papers written jointly by members and nonmembers are not eligible. Requires Society membership
Arthur M. Wellington Prize for <u>Paper (</u> ASCE)	Nov. 1	For transportation on land, on the water, in the air, or on foundations and closely-related subjects, not including contributions in the form of reports and manuals.
ASCE State-of-the- Art of Civil Engineering Award for <u>Paper</u> (ASCE)	Nov. 1	For paper published in any ASCE publication that addresses the status of knowledge in the special area of interst served by the Institute.
Collingwood Prize for <u>Paper (</u> ASCE)	Feb 1	Open to those who were 35 years of age or less at the time the paper was submitted in essentially its final form. Co-authors over 35 years of age are allowed provided they can attest by a signed letter that they had no part in the paper other than reviewing it. Co-authors over 35 years of age are not eligible for the prize. Papers with co-authors over 35 years of age, but submitted without the required letter, will be disqualified. For a paper (1) describing an engineering work with which the author(s) have been directly connected, or (2) recording investigations contributing to engineering knowledge to which the author(s) have contributed some essential part, and (3) containing a rational digest of results. Any mathematical treatment must show immediate adaptability to professional practice. Accuracy of language and excellence of style are factors in the award. Requires Society membership
T.Y. Lin Award for	Nov. 1	For the paper that deals with prestressed concrete and which has been published in the twelve-month period ending with June of the year preceding the year of award. Preference is given to papers written by

<u>Paper (</u> ASCE)		younger authors. The American Concrete Institute and the Prestresed Concrete Institute will each be invited to nominate a single paper selected from their respective publications (which meet the foregoing criteria) for judging, along with the single paper selected by the Structural Engineering Institute from any ASCE publication. The three papers thus selected will be reviewed by a committee composed of one member each from the American Concrete Institute and the Prestressed Concrete Institute, and one or more members from the SEI – one of which shall be the chair. Requires Society membership
Alfred Noble Prize for <u>Paper (</u> ASCE)	May 1	Managed by ASCE, this is a joint society award that recognizes a paper whose author has not passed his/her 35 <sup>th</sup> birthday at the time the paper is submitted to the society in practically its final form. Papers prepared by not more than two authors are eligible for consideration, but the lead author must be 35 years of age or younger. Papers nominated by SEI must be accompanied by a brief synopsis and a concise statement of the conclusions. Requires Society membership

To learn more about these awards and to download helpful forms, including nomination forms, visit the Web at <u>www.asce.org/awards</u>

## Table of ASCE/SEI Achievement Awards – Arora (April 2008) <a href="http://www.asce.org/awards">http://www.asce.org/awards</a>

Award	Deadline for nomination	Award Criteria
Shortridge Hardesty <i>Award for</i> <u>Achievement (</u> ASCE)	Nov. 1	For substantial contributions in applying fundamental results of research to solution of practical engineering problems in the field of structural stability. Based on a paper published in either the ASCE Structural Engineering Journal (July-June), or the Proceedings of the Structural Stability Research Council (latest available), or upon any other effective contribution in the form of personal efforts and achievements. From 1 to 3 recommendations for the Award shall be made by the SEI Committee on Compression and Flexural Members to the SEI Awards Committee. Requires Society membership
George Winter Award for <u>Achievement</u> (ASCE)	Nov. 1	The recipient is a structural engineer, who has consistently worked at advancing the state-of-the-art of the profession through the practical application of design and/or research studies. The individual must have also demonstrated a commitment to the social or artistic needs of the community through work performed in an area not directly related to engineering or science.
Ernest E. Howard <i>Award for</i> <u>Achievement</u> (ASCE)	Nov. 1	For a definite contribution to the advancement of structural engineering, either in research, planning, design or construction, including methods and materials, these contributions being made in the form of a paper or other written presentation or through notable performance or specific actions which have served to advance structural engineering. The Committee on the Ernest E. Howard Award may also designate "second and third order of merit" nominees. These candidates will be reconsidered by the Committee for the next two years. Other remaining candidates will be reconsidered only if re-sponsored after a five-year waiting period. Requires Society membership
Jack E. Cermak <i>Medal for</i> <u>Achievement (</u> ASCE)	Nov. 1	For outstanding contributions to research and/or practice in wind engineering. During the year following receipt of the Medal, the recipient(s) will be invited to deliver the Jack E. Cermak Lecture on a topic within the designated subject area of the award, to be presented at one of the ASCE national meetings, conferences, congresses, or conventions.
Nathan M. Newmark <i>Medal for</i> <u>Achievement (</u> ASCE)	Nov. 1	For contributions in structural mechanics that helped substantially to strengthen the scientific base of structural engineering, these contributions having been made in the form of papers or other written presentations. The field of structural mechanics should be interpreted broadly and should include continuum mechanics related to structural and geotechnical engineering. Requires Society membership
Walter L. Huber Civil Engineering Research <i>Prizes for</i> <u>Achievement</u> (ASCE)	Oct. 1	For notable achievements in research related to civil engineering. Preference is given to younger members (generally under 40 years of age) of early accomplishment who can be expected to continue fruitful careers in research. Documentation shall be limited to ten pages plus the nomination form. Judged by a designated award committee composed of representatives from TAC and four Institute representatives and designated by TAC and CIL. Members shall serve three-year overlapping terms. The Chair shall be the senior Committee member. To the extent possible, the committee shall include two practitioners and three educators. Requires Society membership
Innovation in Civil Engineering Award for <u>Innovation</u> (ASCE)	Nov. 1	Recognizes creativity in the form of innovative concepts in structural framing members or arrangements, fabrication and erection procedures, construction techniques and repairs and maintenance measures. Innovations developed or implemented in the six-year period preceding the date of award are eligible. For the 2009 award, the eligibility period is 2002-2008. Requires Society membership

Walter P. Moore, Jr. Award for <u>Achievement (</u> SEI)	Nov. 1	The award is made annually to a structural engineer who has demonstrated technical expertise in and dedication to the development of structural codes and standards. The contribution may have been in the form of papers, presentations, extensive practical experience, research, committee participation, or through other activities. No more than one award is made each year unless the achievement upon which the nomination is based is considered to be the joint achievement of more than one person. Nomination may be submitted by anyone. http://www.SEInstitute.org/inside/honorawards.cfm.
Dennis L. Tewksbury Award for <u>Service (</u> SEI)	Nov. 1	The Award shall recognize an individual member of SEI and of ASCE who has advanced the interests of SEI through innovative or visionary leadership; who has promoted the growth and visibility of SEI; who has established working relationships between SEI and other structural engineering organizations; or who has rendered valuable service to the structural engineering profession. No more than one awards is made each year. Nominations may be submitted by anyone. http://www.SEInstitute.org/inside/honorawards.cfm.
Gene Wilhoite Innovation in Transmission Line Engineering Award for <u>Achievement (SEI)</u>	Nov. 1	The award is made annually to a member of the Society who has made a significant contribution to the advancement of the arts and science of transmission line engineering. The individual shall also be an active participant in the various levels of the committee responsibilities, including national technical activities. <u>http://www.SEInstitute.org/inside/honorawards.cfm</u> .

To learn more about these awards and to download helpful forms, including nomination forms, visit the Web at <u>www.asce.org/awards</u>

From: Sent:	Rossberg, Jim [jrossberg@asce.org] Wednesday, April 23, 2008 2:20 PM
То:	Rossberg, Jim
Subject:	For Chairs of All SEI Committees
Attachments:	Committee Member Reg Form.doc

To: Chairs of all SEI committees

Hi everyone,

This e-mail is primarily directed towards committees that will be meeting at the 08 Structures Congress however I wanted to make everyone aware of what's occurring so that everyone has an opportunity to provide feedback if they so choose.

With the Congress fast approaching I'm sure that the agendas for those of you meeting at the Congress are pretty well finalized. I'd like to ask you to add two very short items to your agendas if you wouldn't mind. The first item below is for all committees, the second item is for TAD Chairs only and the third, essentially the reciprocal of item 2, is for CSAD chairs. Thanks for considering adding these items.

I look forward to seeing everyone in Vancouver next week. If you have any questions please feel free to speak with any member of the SEI staff.

Regards,

Jim

PS - if you are meeting at the Congress and need to make copies we have rented a reasonably decent copier for your use. It's located in the Speaker Preparation Room (King George's Room) on the third floor of the hotel. The copier has collating, stapling and double-sided capabilities. Jim

**Item 1: Committee Meeting Attendance Only badges:** At the Structures Congress each year there are approximately 50 to 60 committees of SEI which meet. The thinking of course is that having these meetings at the Congress will enable folks to both attend their meetings and the Congress. Quite a few individuals do indeed do both - register for the Congress and attend committee meetings. There are of course some who come to the Congress specifically to attend their committee meetings and, for a wide variety of legitimate reasons, choose not to register for the Congress. This is absolutely fine - active participation on committees and the work accomplished by the committees is at the very heart of SEI and its purpose for existing.

As an experiment this year, we are offering individuals who come to Vancouver to attend committee meetings the opportunity to receive a Congress badge that would allow them to partake of the refreshment breaks and visit the exhibit hall while they are in Vancouver. The primary reason we are doing this is that we'd like to obtain a more accurate count of the people who are at the Congress. This will help us in three ways: first, it will enable us to do a better job in reserving enough sleeping rooms with the hotel. When we sign the contract with the hotel, often 2 or 3 years in advance, we have to guess how many sleeping rooms and on which nights we need them. Yes, we have past history but because we don't have good numbers of actual attendees we tend to be cautious (FYI - when we contract with the hotel and reserve sleeping rooms we have to pay for any unsold sleeping rooms below 85% of the total rooms that we blocked off.) Having a better number will also help us in our efforts to negotiate a lower rate for the rooms as well.

Secondly, as you've hopefully noticed we have been adding a lot of new and improved features to the Congress. One of the things that I'd like to do in the future is offer refreshments throughout the day when committee meetings are being held even when the exhibit hall isn't open. To do that, we need to have a better indication of how many people are at the Committee meetings.

And lastly, having a better idea of the total number of individuals at the Congress is important for the

exhibitors which is why this badge will allow access to the exhibit hall except during ticketed events such as lunch and receptions. Naturally exhibitors would like to see as many people as possible and the more people who we can document as having access to the exhibit hall the more we may be able to charge for the booths.

So please encourage individuals attending your committee meetings who haven't registered for the Congress to please take a moment to fill out the attached form (they are also at the Congress registration desk) and drop it off at the Registration Desk and they will receive a badge that says "Exhibit Hall and Refreshments Only" - the badge won't permit you access to the Sessions, lunches and receptions, but by doing so it will help us in our efforts to continue to improve the Congress.

**Item 2: (Chairs of TAD committees)** Participation in SEI's standards committees: Working to advance the structural engineering profession is the underlying premise behind all committees of SEI. Some committees are working in the areas of business, some in professional practice, some are focused on the technology and others are developing standards. Everyone should feel welcome to participate in any of the committees regardless of the division in which the committee resides. One element of this that I'd particularly like to encourage is the "cross pollination" between the technical committees in TAD and the standards committees in CSAD. Folks in TAD may not know that participation and membership on the SEI standards committees is open to everyone - and participation by a broad, diverse group is essential so that no one particular interest group dominates the development of a standard.

So if you're not sure what standards activities are underway in SEI or if you'd like to join a standards committee, please go to SEI's website at <u>www.SEInstitute.org</u> and under the heading "Committees" you'll find a complete listing of the standards committees and an application to join. If you have any questions about any of the committees, please feel free to contact any member of SEI staff or the committee chair directly.

**Item 3: (For chairs of CSAD committees)** Resource Available: It's a natural tendency to focus on our tasks at hand, after all we engineers tend to be very goal-oriented. But as you pursue your standards development work please don't forget that there are over 90 sister committees which reside in the Technical Activities Division of SEI which may be an excellent resource for your efforts or who may be interested in helping you fill gaps in your standards. Although there's not a perfect subject-for-subject match between the standards committees and the technical committees, there is probably substantially more overlap than you may think - and if there's an important, burning issue that you're attempting to resolve a TAD committee might take it on as a task committee or special project.

So as you're having your meeting in Vancouver, if an issue arises for which lacks the technical history that you'd like, consider approaching a TAD committee or even the Excom of the Division itself. You can find a complete listing of the committees of TAD at SEI's website at <u>www.SEInstitute.org</u> and if you have any questions about any of the committees please feel free to contact any member of the SEI staff.

Thanks,

Jim

James A. Rossberg, P.E. Director, SEI of ASCE 703-295-6196