Final Program

ARCHITECTURAL ENGINEERING CONFERENCE
OAKLAND, CALIFORNIA
MARCH 30 - APRIL 2, 2011

Earn AIA/CES Learning Units and PDH credits.

Program Highlights:
Pre-Conference Workshop
Autodesk Gallery Tour in San Francisco
Technical Sessions
Final of the Student Competition
AEI National Student Conference
Networking Events
Welcome to Oakland

It is our pleasure to welcome you to AEI 2011 in Oakland, California, March 31 – April 1, 2011. AEI 2011 is the 2011 National Conference of the Architectural Engineering Institute (AEI). AEI 2011 continues the high and well-received educational, technical and professional traditions of previous AEI conferences in Austin, Texas (2003), Omaha, Nebraska (2006), and Denver, Colorado (2008).

We hope you will enjoy interacting with colleagues and other conference attendees during this comprehensive examination of building integration practices and issues. Professional engineers, practitioners, researchers, owners, officials, educators and students will be interacting with each other over the course of the conference. They will be attending workshops, technical sessions, committee meetings, tours, the career fair, student competitions, and professional exhibits.

AEI 2011 has been made possible by the hard work and dedication of many individuals, including all the conference steering committee members, authors, abstract and paper reviewers, workshop presenters, and AEI and ASCE staff. Numerous companies and professional organizations have provided financial and organizational help.

On behalf of all of us here at AEI, we are happy you chose to join us for this special event. We hope you find your participation enjoyable and rewarding both personally and professionally.

Abe Lynn, Ph.D.
Professor
Architectural Engineering Department
California Polytechnic State University
San Luis Obispo, California

Robert Reitherman, M.Arch
Executive Director
Consortium of Universities for Research in Earthquake Engineering (CUREE)

Organizing Committee

Abe Lynn, Ph.D., A.M.ASCE Co-Chair
California Polytechnic State University

Robert Reitherman, Co-Chair
Consortium of Universities for Research in Earthquake Engineering (CUREE)

Thomas R. Babacz, P.E., M.ASCE
Retired

Chimay J. Anumba, Ph.D., D.Sc., Dr.h.c., C.Eng/PE., FASCE, FICE, FInstP, FCIQOB
Pennsylvania State University

Scott D. Campbell, Ph.D., P.E., MASCE
Structural Analysis Consulting Group

Emily Carlip
California Polytechnic State University

Kelly Cobeen, S.E., M.ASCE
Wiss, Janney, Elstner Associates, Inc.

Stephanie Davi Ercolini
Director, Regional Programs (West)
ACE Mentor Program of America, Inc.

Angela Lewis, LEED AP
University of Reading and Pennsylvania State University

Charles A. Meyer, P.E.
Henry Adams, LLC

Thanos Tzempelikos, M.A.Sc., Ph.D.
Purdue University

Filza H. Walters
Lawrence Technological University

Craig Baltimore, Ph.D., P.E., M.ASCE
California Polytechnic State University

Kenna Chapin, P.E.
Wallace Engineering

Scott R. Hamilton, P.E., M.ASCE
Stanford University

Karen Reibold
Kansas State University

Raphael A. (Ray) Yunk, P.E., LEED AP
Kansas State University

AEI Staff
Amar Chaker, Ph.D. – AEI Director, ASCE
Jennifer Balsley, P.E. – AEI Manager, ASCE
Verma Jameson, AEI Administrator, ASCE

ASCE Staff
Lucy King, CMP – Senior Manager, Conferences & Meeting Services, ASCE
Jessica Johnson – Coordinator, Conferences & Meeting Services, ASCE
Sean Scully – Manager Exhibits, ASCE

Schedule-At-A-Glance (Subject to Change)

Wednesday, March 30
12:00 p.m. – 5:00 p.m. Registration
1:30 – 5:00 p.m. Workshop 201
3:30 – 5:00 p.m. Autodesk Gallery Tour in San Francisco
6:00 – 7:30 p.m. Welcome Reception
6:00 – 11:00 p.m. Committee Meetings

Thursday, March 31
7:00 a.m. – 5:00 p.m. Registration (Closed for lunch 12:00 to 1:00 p.m.)
8:00 a.m. – 11:00 a.m. Committee Meetings
8:00 a.m. – 5:00 p.m. Student Competition
8:00 a.m. – 5:00 p.m. 2011 AEI National Student Conference
8:00 – 10:00 a.m. Opening Plenary & Continental Breakfast
10:00 a.m. – 12:00 p.m. Technical Sessions
12:00 – 1:30 p.m. Awards Luncheon
10:00 a.m. – 12:00 p.m. Student Competition Jury Feedback & Wrap Up
11:30 a.m. – 1:30 p.m. Networking Break
10:00 a.m. – 3:30 p.m. Technical Sessions
12:00 – 1:30 p.m. Lunch on Your Own
1:30 – 3:00 p.m. Technical Sessions
3:00 – 3:30 p.m. Networking Break
3:30 – 5:30 p.m. Cathedral Walking Tour
6:00 – 8:00 p.m. Career Fair & Reception in Exhibit Area

Friday, April 1
7:00 a.m. – 5:00 p.m. Registration (Closed for lunch 12:00 to 1:00 p.m.)
8:00 – 10:00 a.m. Student Competition
8:00 a.m. – 12:00 p.m. ACE Mentor Program
8:30 – 10:00 a.m. Plenary Session
10:00 – 10:30 a.m. Networking Break
10:00 a.m. – 12:00 p.m. Technical Sessions
12:00 – 1:30 p.m. Awards Luncheon
1:30 – 5:00 p.m. Student Chapter Meeting & Elections
10:00 a.m. – 3:30 p.m. Student Competition Jury Feedback & Wrap Up
10:00 a.m. – 12:00 p.m. Technical Sessions
12:00 – 1:30 p.m. ACE Mentor Program
1:30 – 3:00 p.m. Technical Sessions
3:00 – 3:30 p.m. Networking Break
3:30 – 5:00 p.m. Technical Sessions
6:00 – 8:00 p.m. Career Fair & Reception in Exhibit Area

Saturday, April 2
8:00 a.m. – 6:00 p.m. Committee Meetings
8:00 a.m. – 5:00 p.m. Student Tour of San Francisco
3:30 – 5:00 p.m. Technical Sessions
3:00 – 3:30 p.m. Networking Break
3:30 – 5:00 p.m. Technical Sessions
6:00 – 9:00 p.m. Student Event

Schedule-At-A-Glance (Subject to Change)
Special Events

Wednesday, March 30
1:30 – 5:00 p.m.
Location: Room 201
Workshop
Enjoy a unique workshop on the Design of Modern Glazing Systems, with particular emphasis on earthquake and blast. Three leading experts in the field: Dr. Mohammed Ettouney, Ph.D., PE, FAE (Principal, Wielandt Associates, Inc., and former President of AEI), Dr. Ali Memari, Ph.D., P.E. (Professor, Architectural Engineering Dept., Pennsylvania State University, and Chair of the AEI Curtain Walls Committee), and Stephen L. Fisher, SE (Bagatelles Architectural Glass Systems, Inc.) will give this workshop. It covers curtain wall design (industrial standards, weatherproofing, structure, thermal, movement, fire, acoustic, sustainability, durability), curtain wall types, special design considerations (sunshades, security and blast, sloped glazing, challenging geometry), testing and specialized glazing.

3:30 – 5:00 p.m.
Autodesk Gallery Tour in San Francisco
Offsite
Take a short BART subway ride from the Conference hotel in Oakland to the Embarcadero station in San Francisco. The Autodesk gallery at One Market Street in San Francisco is open this Wednesday, March 30, from noon to 5:00 p.m. It has a large number of impressive three-dimensional and other exhibits created with design and modeling software, including examples of both architectural and engineering applications.

6:00 – 7:30 p.m.
Grand Ballroom Foyer
Welcome Reception
Reconnect with former colleagues and meet new friends at this year’s Welcome Reception. Enjoy light refreshments in the exhibits area as you network and discuss which sessions to attend.

Thursday, March 31
8:00 – 10:00 a.m.
Grand Ballroom E-H
Opening Plenary & Continental Breakfast
Listen to a multidisciplinary team from Skidmore, Owings & Merrill (SOM) discuss interdisciplinary architectural/structural collaboration using the San Francisco International Airport Terminal, the U.S. Embassy in Beijing, the Huawei Shanghai Campus, the San Bernardino Courthouse, and the Cathedral of Christ the Light as case studies. The presentation will discuss the design, detailing, documentation, and execution phases illustrating the collaborative process, citing examples from the case studies.

8:00 a.m. – 5:00 p.m.
2011 AEI National Student Conference
Student Chapter Officers and other members of the AEI Student Chapters across the country will participate in this year’s 2011 AEI National Student Conference. They will meet to share their experiences and discuss common issues, and hold the election of the AEI National Student Officers. Their participation in this year’s Conference will enable them to interact with practicing engineers and other professionals and also to attend the final of the AEI Student Competition and sessions of the 2011 Architectural Engineering Conference.

8:00 a.m. – 5:00 p.m.
Grand Ballroom A-D
ASCE Charles Pankow Foundation Annual Architectural Engineering Student Competition
Thanks to a generous grant of the Charles Pankow Foundation, ASCE established in 2009-2010 an annual architectural engineering student competition (www.aeicompilation.org). This year’s competition will challenge students to address the design issues for a new Contemporary Art Museum located in San Francisco, California. The proposed project site is located at the intersection of Moraga Avenue and Montgomery Street. The competition has been designed to reflect the Pankow goals: 1) To improve the quality, efficiency and value of the design and construction of a new and challenging building; 2) To improve the performance of the building design and construction teams by advancing integration, collaboration, communication, and efficiency through innovative new tools and technologies, and by advancing new means and methods for project team practices. The finalist teams will present their designs to a prestigious jury of leading experts in each of the categories: structural system design, mechanical systems design, electrical systems design, building integration design, and innovative construction management and construction methods focused on integrated design teams and design/build delivery. The event will be recorded and broadcast live over the Internet. The winners will be announced at the Awards Luncheon this Friday, April 1.

3:30 – 5:30 p.m.
Offsite
Walking Tour to Cathedral of Christ the Light
Attendees may endeavor to take a tour of the Cathedral of Christ the Light, after the concurrent technical presentation sessions early in the afternoon. The building is a spectacular work of architecture that integrates an innovative combination of structural materials (steel, concrete, glulam timber, aluminum), dramatic glazing, and seismic isolation.

6:00 – 8:00 p.m.
Grand Ballroom Foyer
Career Fair & Reception in Exhibit Area
Join leading architectural engineering firms and a large number of highly motivated architectural engineering students at the career fair and reception in the exhibit area. It will provide a unique opportunity for student chapter leaders, finalists of the AEI Student Competition, and professionals to get to know each other. Employers seeking to recruit bright young employees will have an opportunity to introduce their firm to many promising students, review resumes, and possibly make appointments for interviews.

Friday, April 1
8:30 – 10:00 a.m.
Grand Ballroom E-H
Plenary Session
Be present at the Plenary Session to hear the team for the California Pacific Medical Center Cathedral Hill Hospital Project discuss “Integrating Lean and Green” on this most innovative urban replacement hospital project that is breaking new ground in multiple areas of design and operations. Project team members from different backgrounds (KM/V, GC, subcontractor, architect, structural engineer, etc.) will discuss lean design, collaboration, information flow between designers and trades, design optimization, production planning, role of technology, co-location, and contractual and financial framework.

8:00 a.m. – 12:00 p.m.
Grand Ballroom A-D
ACE Mentor High School Program
The nationwide ACE Mentor program, established in 1994, connects high school students with practitioners in the Architecture, Construction, and Engineering fields. Students work in after-school sessions on design projects. Local ACE Mentor students will have a special session this Friday, April 1, in which they will present their projects and listen to a university student, university professor, and design professional explain what can lie in store for them in the architectural engineering field.

10:00 a.m. – 12:00 p.m.
Grand Ballroom A-D
Student Competition Jury Feedback & Wrap Up
12:00 – 1:30 p.m.
Grand Ballroom E-H
Awards Luncheon
Attend the Awards Luncheon this Friday, April 1 to honor numerous outstanding professionals and students. The awards to be presented include: the winning and runner-up teams in each of the 5 categories of the AEI Student Competition; the newly promoted Fellows of AEI; the Best Paper in the Journal of Architectural Engineering; the Outstanding Reviewer Award for the Journal of Architectural Engineering; the Best Conference Paper Award; Charter Certificates for the AEI Student Chapters; and Certificates of Appreciation for extraordinary service to AEI and the profession.

1:30 – 5:00 p.m.
Grand Ballroom A-D
Student Chapter Meetings & Elections
6:00 – 9:00
Student Event at Pier 39

Saturday, April 2
8:00 a.m. – 5:00 p.m.
Offsite
University Student Tour of San Francisco: Students can travel by subway (BART) to San Francisco for a walking tour of the highrise downtown area and waterfront and enjoy a visit to a design office.
**TECHNICAL PROGRAM GRID** Subject to Change

**THURSDAY, MARCH 31, 2011**

**OPENING PLENARY & CONTINENTAL BREAKFAST 8:30 - 10:00 A.M.**

**GRAND BALLROOM E - HW** Welcome and Introduction: Abe Lynn and Robert Reithermann, Conference Co-Chairs, and Clarence Waters, AEI President


Skidmore Owings Merrill

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**SESSIONS**

| SESSION 1 | Room 201 | Architectural Engineering Education 1
Relating Building Information Modeling & Architectural Engineering Curricula
Blythe Vogt, P.E.
The Temple of Atrioc: A Study Abroad Internship for Architectural Engineering Students
Ece Erdogmus, Ph.D., A.MASCE, Cody M. Buckley, and Holly Brink
The Golden Gate Bridge Outdoor Exhibition: Public Works for Public Learning
Denis Mulligan, P.E., MASCE, and Robert Reitherman |
| --- | --- | --- |
| SESSION 2 | Room 202 | Building Envelope 1
You Can’t Judge A Book By Its Cover: Rethinking The Open Rainscreen For The Exterior Building Envelope
Bradley Lukarinic AIA, LEED AP, Joseph V. Musarella, Ph.D., P.E, FASCE, and Carol Friedman
Evaluation of Three-Coat Stucco Installations on Commercial Buildings
Jodi Wolf, P.E., MASCE, Michael Goeringer, and Amanda Maino, A.MASCE
Managing Occupant Comfort with Highly Transparent All-Glass Facades
David Green, Mark Scott, and Randy Burkett |
| SESSION 3 | Room 203 | Structural Systems 1
Analytical Load and Dynamic Increase Factors for Progressive Collapse Analysis of Building Frames
Meng-Hao Tsai, A.MASCE
Blast Resistant Design Technology and Its Use in Antiterrorism Protection of Structures
Darell Lawver, P.E., MASCE, David Vaughan, Darren Tennant, A.MASCE, and Jim Weeks, A.MASCE
Natural Structural Systems and Forms
M. Sarkisian, E. Long, C.S. Doo, and D. Shoocks
Sustainable Structural Systems and Configurations for Tall Buildings
Kyoung Sun Moon, A.MASCE |
| SESSION 4 | Room 204 | Building Energy Systems 1
Identifying the Determinants of Energy Use in Texas A&M University, Kingsville Campus
J.A.J. Caeiro, W. Gang, and J. Glusing, A.MASCE
Energy Efficient Method Identification for an Education Building
Emmanuel Ayala, Jelisa Kocurek, Joel Wright, Leah Sijsnsky, Jackie Chang, Ricardo Contreras Jr., and Gang Wang, Ph.D, P.E.
Aireto-Air Variable Refrigerant Flow Systems
Paul Wroff, and Julia Keen
Sustainable Concrete: Impacts of Existing and Emerging Materials and Technologies on the Construction Industry
M. Radlinski, Ph.D., P.E., M.ASCE, N. J. Harris, Ph.D., P.E., and P. D. Moncarz, Ph.D, P.E., SCPM, F.ASCE |
| SESSION 5 | Room 201 | Architectural Engineering Education 2
The Retention of Women in the Architectural Engineering Workforce
J. A. Keen, PhD, P.E., HBDC
Using Case Studies to Characterize the Broader Meaning of Engineering Design for Today’s Student
Pamala A. Brady, P.E., MASCE, and John W. Lawson, P.E., MASCE
Carnegie Mellon University Facilities as an Educational Laboratory
Donald Coffelt, M.E., MASCE and Chris Hendrickson, DM, Ph.D., Hon.MASCE
Drawing and Modeling: Analog Tools in the Age of BIM
Anthony Denzer, Ph.D., M.Arch., and Jan Gardzalewski, M.Arch |
| SESSION 6 | Room 202 | Building Envelope 2
Introduction of a Transparent Sustainable Load Bearing Wall System with Integrated Photovoltaic for Residential Construction
A. M. Memari, Ph.D., P.E., MASCE and Joseph A. Standley, P.E., S.MASCE
Racking Test Evaluation of Unitized Curtain Wall Systems Using Glazing Tapes
A.M. Memari, K. Hartman, and P.A. Kremer
Seismic Evaluation of Glazed Storefront Systems through Cyclic Racking Test
A. M. Memari, Ph.D., P.E., MASCE P. A. Kremer, and K. Hartman
Seismic Evaluation of the Four-Sided Structural Sealant Glazing Curtain Wall System for Cathedel Hill Hospital Project
A. M. Memari, Ph.D., P.E., MASCE S. Fisher, C. Krumenacker, K. A. Broker, and R-U. Madrich |
| SESSION 7 | Room 203 | Structural Systems 2
Structural Engineering for Complex-Shaped Tall Buildings
Kyoung Sun Moon, A.MASCE
FEMA P.58 – Next-generation Performance Assessment of Buildings
Ronald O. Hamburger, SE, SECB
Determination of Building Modal Parameters Using Low-Level Excitation
G. Archer, P.E., MASCE and C. C. McDaniel, P.E., MASCE |
| SESSION 8 | Room 204 | Building Energy Systems 2
Predicting the Environmental Impact of Structures in Regions of High Seismic Risk
M. Sarkisian, P.E., MASCE, G. Brunn, M. Nasr, M. Hachem, and L. Hu
Camera Aided Luminance Measurement of the Luminous Surfaces of Different Light Sources
Hongyi Cai, Ph.D.
Utilizing a Multidisciplinary Design Team for Energy Efficient Renovations of Existing Buildings
Jan Gardzalewski, M.Arch., and Gang Tan, Ph.D., P.E., MASCE
Experimental Comparison of Modular Photovoltaic-Thermal Solar Panels
Stuart Baur, Ph.D., A.I.A. and Nicole Anis |
| SESSION 9 | Room 205 | Seismic Performance of Nonstructural Components 1
Selection and Installation of Seismic Restraints for Non-Structural Components
Scott Campbell, Ph.D, P.E., Richard Sherren, P.E., and Jim Pooler
Non-Structural Components and Systems Designing Hospitals for Post-Earthquake Functionality
Chris V. Tolias |

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**TECHNICAL SESSIONS 10:30 A.M. - 12:00 P.M.**

**TECHNICAL SESSIONS 1:30 - 3:00 P.M.**

**TECHNICAL SESSIONS 3:30 - 5:00 P.M.**

**TECHNICAL SESSIONS 5:30 - 7:00 P.M.**

**TECHNICAL SESSIONS 7:30 - 9:00 P.M.**

**TECHNICAL SESSIONS 9:30 - 11:00 A.M.**
### SESSION 10  Room 201  
Architectural Engineering Education 3  
**HandsOn Green Building Activities for the Beginning Students**  
Anthony Denzer, Ph.D., M.Arch., and Kendra Heinmuck  
Structural Integration Solution for the Texas A&M 2007 Solar Decathlon "GreenHome"  
A.B. Nichols, A.M.ASCE, and P. Fisk, AfM.ASCE  
A.B. Nichols, A.M.ASCE  

### SESSION 11  Room 202  
High Performance Buildings  
**Panel Discussion moderated by Mohammed Ettouney, Ph.D., P.E., F.AEI, A.MASCE**  
Details to be announced  

### SESSION 12  Room 203  
Seismic Performance of Non-Structural Components 2  
**Research on the Seismic Performance of Nonstructural Components**  
André Filiatrault, Ph.D., P.E., M.ASCE, Steven French, William Holmes, Tara Hutchinson, Emmanuel Maragalis, A.MASCE, Robert Reithjerman  
**Behavior of Nonstructural Components in Recent Earthquakes**  
Eduardo A. Fierro, Eduardo Miranda, Ph.D., M.ASCE, and Cynthia L. Perry  
Reducing the Risks of Nonstructural Earthquake Damage: New Tools for Design Professionals  
Cynthia Perry, Ayse Hortacsu, Maryann Phipps, and Michael Mahaney  
**Demands on Nonstructural Components During Nonlinear Seismic Response of Multistory Structures**  
A. Lepage, A.MASCE, J. M. Shoemaker, and A. M. Memari, Ph.D., P.E., M.ASCE  

### SESSION 13  Room 204  
Building Design Process 1  
**Innovation and Improvements of Mechanical, Electrical and Plumbing Systems for Modular Construction using Building Information Modeling**  
Thomas M. Korman, Ph.D., P.E., P.L.S., MASCE, and Na Lu, Ph.D.  
**Building Information Modeling for Electrical Contractors: Current Practice and Recommendations**  
Larry G. Simonian P.E., P.M.P., and Thomas M. Korman, Ph.D., P.E., P.L.S., MASCE  
**Construction Safety in Design Process**  
Roozbah Ghaderi, S.M.ASCE, and Mohammad Kasirrossafar  
**Crossing Disciplines in Forensic Engineering**  
Liberty L. Lewis, P.E.  

### SESSION 14  Room 201  
Public Private Partnership (PPP) - "Sustainability in the context of PPP Educational Projects in Ireland"  
Renuka Rajput, and Louis Gunnigan  
**Participation of Women in Architectural Engineering: What Causes It?**  
Allen C. Estes, Ph.D., P.E., MASCE, and Pamalee Brady, Ph.D., MASCE  
**Interdisciplinary Design Experience for the Masses**  
Brent Nuttoll, Jill Nelson, P.E., M.ASCE, and Allen C. Estes, Ph.D., P.E., MASCE  
**Accreditation -- the New Architectural Engineering Program Criterai**  

### SESSION 15  Room 202  
Case Studies 1  
**The Materials of The Cathedral of Christ the Light**  
Mark Sarkisian, Ph.D., P.E., M.ASC, Peter Lee, Eric Long, and C. Keith Baswell  
**Glass and Steel: Transparent and Lightweight Enclosure Structures in China**  
**Historic Buildings - The Process and the Materials**  
Uma Gilmartin, and Jonathan Jadico  
**Landmark Art and Structure: Winspear Opera House**  
Dudley McFarquhar, Ph.D., P.E., M.ASC, M. ABI  

### SESSION 16  Room 203  
Facilities Management 1  
**A Literature Review on Measuring Building Performance by Using Key Performance Indicators**  
S. Lory  
**Use of A Multimethodology Research Approach to Improve Building Operating Decisions**  
Angela Lewis, and Dr. Abbas Emwaili  
**A Dream of Ideal Project Delivery System**  
Rahman Azari-Najafabadi, Glenn Ballard, AfM.ASCE, Seongkyun Cho, and Yong-Woo Kim  

### SESSION 17  Room 204  
Building Design Process 2  
**Global Project Delivery Systems Using BIM**  
Alex Kunz, and H. Glenn Ballard  
**Analysis of Building Element Design Methods**  
H. Nur Genc, and M. Cem Altun  
**Effectiveness of the "VDI H.F. Müller Method" in Building Element Design**  
M. Cem Altun, and H. Nur Genc  

### SESSION 18  Room 201  
Wood  
**Strengths and Weaknesses of Wood Framed Structures**  
**Performance of Structural Glued Laminated Members**  
**Earthquake Damage Assessment of Residential Wood Frame Structures**  
L.M. Shusto, P.E., and Eric R. Ahlberg, Ph.D., P.E., M.ASC  
**The Growing Role of Wood in Building Sustainability**  
Michelle Kam-Biran, P.E., S.E., and Lisa Podesto, M.S., P.E., CGBP, M.ASC  

### SESSION 19  Room 202  
Case Studies 2  
**Structural Fire Engineering for Modern Building Design – Case Study**  
**Multidisciplinary Assessment of Critical Facility Response to Natural Disasters: The Case of Hurricane Katrina**  
Adam W. Hapij, Ph.D., Mittel Simpler, P.E., and Scott Hill, P.E.  

### SESSION 20  Room 203  
Facilities Management 2  
**Commissioning of Fire & Life Safety Systems**  
David Hague, P.E., CPS  
**Design and Planning for Safety (DPS), A Factor Modeling Approach to Find the Best Response to Hazard**  
M. Taiebat, and K. Ku  
**High Performance Modular Building: Inspiration from the Past, Technology from the Present, Design for the Future**  
Bill Jing, Ph.D., Dean DiGiovanni, P.E., and Agnes Won, A.I.A.  

### SESSION 21  Room 204  
Building Security  
**Panel Discussion moderated by Mohammed Ettouney, Ph.D., P.E., F.AEI.**  
Details to be announced
General Information

Attire
The dress code for the Conference is business casual (i.e. slacks, casual dresses) to business attire (i.e. neckties, business suits). Meeting room temperatures will vary, so wear layered clothing to ensure your personal comfort. We also recommend attendees wear comfortable shoes. Please note that certain events may have specific details on attire, and you should refer to the event for more information.

Badge Policy and Ribbons
Your Conference registration name badge is your admission to the educational sessions. Please wear your badge at all times while in the Oakland Marriott. Tickets are required for the pre- and post-conference events, meals, and special events. Where tickets are required, please be sure to bring your tickets with you to each event as you will not be admitted without a ticket. Ribbons will be available at the Registration desk. ASCE recommends you remove your badge when leaving the hotel.

Medical Emergencies
ASCE hopes that your visit to Oakland, CA and the 2011 AEI Conference will be free from illness but in case you or a family member needs medical attention during your stay, please observe the following procedures:
If you become ill at the Oakland Marriott, please contact the Front Desk and tell them you have a medical emergency that requires immediate attention. House phones are located [Insert location of house phones].
Other options: [Insert a Nearby Urgent Care Clinic or Hospital]
For dental emergencies, contact [Insert Emergency Dental Contact].

Meeting Room Overcrowding
ASCE will make every effort to schedule popular events in rooms large enough to accommodate anticipated attendance. Since many events are extremely popular, it is wise to select alternative events as you plan your conference schedule. ASCE and the Oakland Marriott are REQUIRED to follow local fire regulations and may ask participants in rooms filled to capacity to choose another event.

No Smoking Policy
ASCE supports a “No Smoking” policy. Smoking is prohibited in the Oakland Marriott and all venues hosting ASCE events.

Post-Conference Evaluation
An electronic evaluation will be sent out immediately after the Conference to all attendees. All who participate in this evaluation will be eligible for a complimentary registration to 2011 AEI Conference in Oakland, CA. Watch your email for more information the week of April 6, 2011.

Professional Development Hours (PDHs)
You may earn PDHs, which are nationally recognized units of record, by attending conference concurrent sessions and short courses. Please note there are differences from state to state in continuing education requirements for professional engineering licensure. Each state licensing board has the final authority to approve course, credits, PDHs, and other methods of earning credits in that state. ASCE strongly recommends that individuals regularly check with their state licensing boards for specific continuing education requirements in their jurisdictions that affect professional engineering licensure and the ability to renew licensure. Earn up to 10.5.

Recording of Sessions*
Video or audio recording of any educational session is strictly prohibited without prior written permission from both ASCE and the session presenter(s).

Release/Waiver/Special Assistance*
Photograph Release: By submitting the Registration form, I hereby release any photographs that may be incidentally taken of me during these events by ASCE to be used for any purpose.
Liability Waiver: I agree and acknowledge that I am undertaking participation in ASCE events and activities at my own free and intentional act, and I am fully aware that possible physical injury might occur to me as a result of my participation. I give this acknowledgement freely and knowingly that I am, as a result, able to participate in ASCE events, and I do hereby assume responsibility for my own well being. I also agree not to allow any other individual to participate in my place.

Tour Policy
Tours will depart from Hotel Lobby to take you to your destination, so plan to arrive promptly as buses will leave on time. Tours are available on a first come, first serve basis and have limited capacity. A separate registration fee is required to offset the costs involved with the tours. ASCE reserves the right to cancel a tour if the minimum registration is not met.

Weather
Average temperatures range from a high of 64 degrees during the day to around 49 degrees in the evening

Onsite Registration and Hours

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
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<tbody>
<tr>
<td>Wednesday, March 30</td>
<td>12:00 – 5:00 p.m.</td>
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<tr>
<td>Thursday, March 31</td>
<td>7:00 a.m. – 5:00 p.m.</td>
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<td>Friday, April 1</td>
<td>7:00 a.m. – 5:00 p.m.</td>
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## Committee Meetings

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<tr>
<th>No.</th>
<th>Committee</th>
<th>Day</th>
<th>Date</th>
<th>Time</th>
<th>Chair</th>
<th>Room Assignment</th>
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<tbody>
<tr>
<td>1</td>
<td>Curtainwall Systems</td>
<td>Wednesday</td>
<td>3/30/11</td>
<td>5:00 - 11:00 pm</td>
<td>Ali Memari</td>
<td>207</td>
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<td>2</td>
<td>Penn State AE Alumni</td>
<td>Thursday</td>
<td>3/31/11</td>
<td>5:30 - 7:30 pm</td>
<td>Chimay Anumba</td>
<td>210 &amp; 211</td>
</tr>
<tr>
<td>3</td>
<td>AEI - Pankow Student Comp</td>
<td>Friday</td>
<td>4/1/11</td>
<td>2:00 - 6:00 pm</td>
<td>Kenna Chapin</td>
<td>207</td>
</tr>
<tr>
<td>4</td>
<td>AEI Board of Governors</td>
<td>Saturday</td>
<td>4/2/11</td>
<td>8:00 am - 5:00 pm</td>
<td>Clarence Waters</td>
<td>207</td>
</tr>
<tr>
<td>5</td>
<td>Academic Council</td>
<td>Saturday</td>
<td>4/2/11</td>
<td>8:00 am - 5:00 pm</td>
<td>Jay Puckett</td>
<td>210</td>
</tr>
<tr>
<td>6</td>
<td>AEI Student Committee</td>
<td>Saturday</td>
<td>4/2/11</td>
<td>8:00 am - 5:00 pm</td>
<td>Scott Hamilton</td>
<td>N/A</td>
</tr>
<tr>
<td>7</td>
<td>AEI Building Security Cte</td>
<td>Saturday</td>
<td>4/2/11</td>
<td>8:00 am - 5:00 pm</td>
<td>Mohammed Ettouney</td>
<td>211</td>
</tr>
<tr>
<td>8</td>
<td>AEI Board of Governors</td>
<td>Sunday</td>
<td>4/3/11</td>
<td>8:00 - 11:00 am</td>
<td>Clarence Waters</td>
<td>Check w/hotel</td>
</tr>
<tr>
<td></td>
<td>AEI Fellows Lounge</td>
<td>Thursday - Friday</td>
<td>3/31 - 4/1/2011</td>
<td>8:00 am - 5:00 pm</td>
<td>N/A</td>
<td>206</td>
</tr>
</tbody>
</table>

## Hotel Floor Plan

![Hotel Floor Plan](attachment:image)
Exhibit Schedule  (Subject to Change)

**Wednesday, March 30, 2011**
- 11:00 – 5:00 p.m. Exhibitor Move-in
- 6:00 – 7:30 p.m. Welcome Reception

**Thursday, March 31, 2011**
- 10:00 a.m. – 3:30 p.m. Exhibit Hours
- 10:00 – 10:30 a.m. AM Networking Break
- 3:00 – 3:30 p.m. PM Networking Break
- 4:00 - 6:00 p.m. Career Fair Move-IN
- 6:00 – 8:00 p.m. Career Fair & Reception

**Friday, April 1, 2011**
- 10:00 a.m. – 3:30 p.m. Exhibit Hours
- 10:00 – 10:30 a.m. AM Networking Break
- 3:00 – 3:30 p.m. PM Networking Break
- 3:30 – 8:00 p.m. Exhibitor Move out

**Career Fair**
- HDR

**Exhibitors**
- Arup 201
- HDR 201
- Vector Corrosion Technologies 202
- Wood Works for Non-Residential Construction 203

**Sponsors:**

**SILVER**
- HDR

**COPPER**
- Taylor & Francis

[Exhibit Hall Floor Plan]