

ASEE

Civil Engineering Division



March 1995 Newsletter

Editor: Alan L. Prasuhn

MESSAGE FROM THE CHAIRMAN

As I start to write this article, I feel like I am preaching to the choir. If you are reading this, you already realize the part that ASEE plays in your professional development. This is my last chance to communicate to you in our Newsletter as the Chair of the Civil Engineering Division of ASEE. I would like to discuss several topics: last summer's ASEE annual meeting in Edmonton, the upcoming ASEE annual meeting in Anaheim, CA in June, and my activity as your representative on ASCE's Committee on Curriculum and Accreditation (CC&A).

In June, the Civil Engineering Division of ASEE had a very successful meeting in Edmonton, Alberta, Canada. Our four professional sessions were very well attended, some to overflowing capacity. I now have a very sincere appreciation of the responsibilities of being a division's Program Chair for an ASEE annual meeting. Our Division does one thing exceptionally well. Our Division's planning luncheon each Tuesday during the annual meeting is so important to the Program Chair for the next annual meeting. When we finish with our planning luncheon, we have our program set for the next year. Many of the other division's program chairs have to set up their entire program throughout the year through correspondence, the telephone or E-Mail. I am sure that Bill Kelly, the Program Chair for the Anaheim meeting, was relieved when he left Edmonton because the 1995 program was set.

Bill Kelly has done an excellent job setting up the program for the 1995 ASEE annual meeting in Anaheim, California. The professional sessions look interesting:

- Session 1615 Facilitating Cross-Disciplinary COOP
- Session 2515 Continued Profession Competency
- Session 3215 Integration of Design & Construction
- Session 3515 Structural Analysis in CE Curriculums

I really look forward to the less formal activities of the Division at the annual ASEE meeting. The RAP session of Monday evening is always an eye opener. Academics and practitioners sit around the room and discuss current "hot" topics, which are impacting the Civil Engineering profession. One is never quite sure how these RAP sessions will turn out because it is entirely dependent upon who attends, what topics are discussed, and who has strong feelings about the topics discussed.

The Division Dinner on Tuesday evening is a highlight for the Division during the annual ASEE meeting. We have eaten steak while on a paddle boat on Lake Tahoe; enjoyed a meal in a lodge at the base of Mt. Hood in Oregon; and been entertained by Mark Twain on a paddle boat floating down the Ohio River. The two Division awards, the George Wadlin Award and the Glenn L. Martin Award, are presented at this annual Division dinner. Every year I leave this dinner with a good feeling toward the Civil Engineering Division and our profession.

Continued on p. 3

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*Same individual in two offices.

In April, I will be attending my fourth meeting of ASCE's Committee on Curriculum and Accreditation as the ASEE representative. CC&A meets every October and April. Believe me, CC&A is a working committee. The October meetings have run a day and a half, at which policies are discussed and made. At both October meetings, the ASCE's Department Heads Council has met for lunch with CC&A to discuss common concerns. I found these interchanges very enlightening. Remember, CC&A is the group within ASCE which sets ABET's "program" criteria for the ABET visits. The meeting last April was a marathon. This is the meeting at which Civil Engineering visitors are recommended for the next round of ABET visits. CC&A is made up of four practitioners and four academics. The practitioners recommend a practitioner for each Civil Engineering program which will be visited the next fall and the four academics on CC&A recommend an academic for each visit. The ABET team chair then has two names to select from for his Civil Engineering team member, a practitioner and an academic. I am happy to report that the team chairs did a good job last year selecting the Civil Engineering ABET visitor from the two names recommended by CC&A.

I feel that it is important that the Civil Engineering Division of ASEE be represented on ASCE's CC&A. During the past three meetings, the ASCE members of CC&A have voted to give the ASEE representative voting privileges. This has made the CC&A meetings more interesting for me because I really feel as if I have an input to CC&A.

The person, who the Division selects as our next Chair-elect, will have the opportunity of serving two years on CC&A. I feel fortunate that I have had the chance to be on CC&A for the past two years.

I hope to see many of you in Anaheim.

Tom Mulinazzi
University of Kansas

If You've Got Something to Say...

E-MAIL IT!

THE ASEE PRISM staff would like ASEE members to know that PRISM is now connected to the Internet, meaning that readers can send letters to the editor electronically. For our new E-mail column, we welcome responses to articles that have appeared in past issues as well as new ideas on current topics and recurring themes in engineering and engineering technology education. Help make PRISM a forum for discussion of important issues and trends in the field by sending in your comments and encouraging others to do the same.

Send e-mail to: prism@asee.org

Letters may also be mailed to:

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ASEE ANNUAL CONVENTION

June 25-28, 1995
Anaheim, California

CIVIL ENGINEERING SESSIONS

CIVIL ENGINEERING DIVISION SESSION 1615
MONDAY, JUNE 2, 1995 4:30 P.M. - 6:00 P.M.

FACILITATING CROSS-DISCIPLINARY COOPERATION WITHIN ENGINEERING

"Facilitating Interdisciplinary Civil Engineering Education Through a Living Laboratory"
by *Paul S. Chinowsky* and *Jorge A. Vanegas*, Georgia Tech

"Teaching Civil Engineering Design Requires Interdisciplinary Skills"
by *Norbert L. Ackermann*, *Susan E. Powers* and *Amy K. Zander*, Clarkson University

"Initiating and Rewarding Cross-Disciplinary Cooperation in Civil Engineering"
by *Vincent P. Drnevich*, Purdue University

The first two papers cover examples of Cross-Disciplinary Cooperation and the third provides an administrator's perspective.

Details submitted by Tony Collins

CIVIL ENGINEERING DIVISION SESSION 2515
TUESDAY, JUNE 27, 1995 2:30 P.M. - 4:15 P.M.

CONTINUING PROFESSIONAL COMPETENCY: WHY OR WHY NOT?

The Civil Engineering Division of the American Society for Engineering Education (ASEE) encourages attendance and active participation in a session it is sponsoring on "Continuing Professional Competency: Why or Why Not" on Tuesday, June 27, 1995 at the ASEE Annual Meeting to be held in Anaheim, California. Topics to be covered include the National Council of Examiners for Engineering and Surveying (NCEES) Model Guidelines for mandatory Continuing Professional Competency (CPC) programs for professional license renewal, organizational membership requirements, and various organizational positions on the subject. The pros and cons of mandatory CPC programs will be hotly debated.

Speakers for the session include *Joe Paul Jones*, P.E., Past President of the National Society of Professional Engineers (NSPE), *James W. Poirot*, P.E., Past President of the American Society of Civil Engineers (ASCE), and *Dr. Bobby E. Price*, P.E., Moderator of the session and University Distinguished Professor of Civil Engineering at Louisiana Tech University.

Joe Paul Jones will present background information on Continuing Professional Competency (CPC), such as the NCEES Model Guidelines for mandatory CPC programs for professional license renewal, the NSPE position on CPC, and his own thoughts on the subject. James Poirot will present the pro side of mandatory CPC for registration purposes and for ASCE membership. Dr. Price will present the con side to refute the idea of mandatory CPC programs. Lively discussion on the subject should be generated.

For more information, contact Dr. Bobby E. Price, Dept. of Civil Engineering, Louisiana Tech University, Ruston, LA 71272, (318)257-3546, or Dr. William Kelly, Dept. of Civil Engineering, University of Nebraska-Lincoln, Lincoln, NE 68588, (402)554-3283. For registration materials, contact ASEE, 1995 Annual Meeting, 1818 N Street, N.W., Suite 600, Washington, D.C. 20036.

Details submitted by Bobby Price

CIVIL ENGINEERING DIVISION SESSION 3215
WEDNESDAY, JUNE 28, 1995 8:30 A.M. - 10:15 A.M.

INTEGRATION OF DESIGN AND CONSTRUCTION IN CIVIL ENGINEERING

Chairs: Ralph Ellis and Jiwon Gupta

Integration of construction considerations in the design process is increasingly common in professional practice and Design-Build is becoming the preferred project delivery system. This session will present three speakers who will provide examples of the integration of design and construction in Civil Engineering courses.

"Computer Integrated Analysis, Design, and Construction of Hydraulic Structures"
by *Mark O. Federle*, Iowa State University.

This paper reports on an NSF funded project which focused on developing computer based instructional material to integrate three Civil Engineering sub-disciplines: Hydraulics, Structural Design, and Construction.

"Responding to the Design and Construction Needs of Rapidly Expanding New Technologies - An Example: Mini Directional Drilling Technology"
by *Erdogan Sener* and *Thomas Iseley*, Purdue University School of Engineering at Indianapolis.

This presentation provides an example of the integration of emerging technologies in the design and construction curriculum.

"An Interactive Case-Based Environment to Integrate Design and Construction Education"
by *Paul S. Chinowsky* and *Jorge A. Vanegas*, Georgia Institute of Technology.

This paper presents the results of current efforts to develop a multimedia, case-based environment for problem solving exercises by interdisciplinary construction and design teams.

Details submitted by Ralph Ellis

CIVIL ENGINEERING DIVISION SESSION 3515
WEDNESDAY, JUNE 28, 1995 2:30 P.M. - 4:15 P.M.

WHAT SHOULD WE BE TEACHING CIVIL ENGINEERING UNDERGRADUATES ABOUT STRUCTURAL ANALYSIS?

The Committee on Computer Applications is sponsoring a thought-provoking session at the 1995 Annual Conference on "What Should We Be Teaching Civil Engineering Undergraduates About Structural Analysis?" The accessibility of the computers to engineers and engineering students necessitates that we carefully review the manner in which we teach the principles of structural analysis. Which analysis

methods are the most important for an undergraduate curriculum? Which classical methods have been overcome by the personal computer revolution? How do we balance the teaching of fundamentals, the use of hand calculations, the understanding of commercial software packages, the ability to use numerical methods, the employment of "classical" methods, and the art of computer modeling?

Five civil engineers with extensive experience in teaching undergraduate structural analysis have submitted papers on this subject and will form a panel to discuss these questions at the conference. They include *Russell Mills* (California State University, Chico), *Bob Henry* (University of New Hampshire), *David Fletcher* (University of the Pacific), *M. Zoghi* (University of Dayton), and *Tom Lenox* (United States Military Academy). As a basis for group discussion, two of these panel members will discuss their undergraduate structural analysis courses. In addition to addressing the questions posed above, these two presenters will discuss their institution's philosophy on incorporating modern analysis methods into an undergraduate structural engineering curriculum. Limiting the formal presentations to two speakers will provide ample time for panel and group discussion of this very timely topic.

Details submitted by Tom Lenox

EDITOR'S COLUMN

This is my second Civil Engineering Division Newsletter. I hope that I am working on something that is useful to the Civil Engineering Division members. Certainly the primary goal is to provide and share information on engineering education. I want to emphasize the word share. I will continue to badger the Executive Board members for contributions, and this will meet one goal, albeit in a top-down fashion. Please consider how much more beneficial the newsletter would become if I were also able to include contributions from other division members. Please send me an article, information item or opinion, on any subject for the next issue (next Fall). If you have a question, perhaps the answer can be found via the newsletter. Note also, and this may be a compelling argument, that the more items I am given, the shorter will be this column. This would be a benefit to all of us!

Please make plans to attend the ASEE Annual Conference in Anaheim. The Civil Engineering Division Session Chairs have been working hard to make our sessions thought provoking, and worth your time and effort to get to the conference. As you register for the conference, don't forget to include the division lunches and the social evening. If you are new to the division, or to ASEE Conferences, you will find that after these events you will no longer be a stranger. To make the program simpler to read, note that all of our division activities end with the number 15.

Also in June is the ASCE Education Conference, of which more details will be found elsewhere in the newsletter. This every five years', I believe the word is quinquennial, event will be well worth your time as well. Maybe we will actually resolve some of the educational issues we have been discussing for so long.

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1995 ASEE NATIONAL CONFERENCE ON CIVIL ENGINEERING EDUCATION

The 1995 ASCE National Conference on Civil Engineering Education will be held June 8-11, 1995 in Denver, Colorado. This conference promises to be different than those in the past according to Jim Yao conference chair and professor of civil engineering at Texas A&M University. First, there will be no long papers by professors! Instead, attendees will work in breakout sessions building on the experience gained at the 1994 Civil Engineering Workshop. Attendees will examine experimental education programs such as those being developed by the NSF coalitions and see how they could be implemented. Consider what is really do-able in a reengineered civil engineering curriculum, discuss a more flexible accreditation process, develop a vision of what the early 21st century professional degree in civil engineering should look like and finally develop an action agenda for the Society's membership. These issues will be developed in the breakout sessions and integrated in the general sessions into a series of recommended actions.

After the conference, the recommendations will be publicized and disseminated to key individuals with the intention that the Society will establish a continuing strategy for implementation and monitoring improvements.

*Submitted by Bill Kelly
Civil Engineering Division Vice-Chair*

ENGINEERING ACCREDITATION COMMISSION

The Engineering Accreditation Commission (EAC) is serious about simplifying the General and Program Criteria for accreditation. The criteria have been widely criticized as too complex and even to encouraging "bean counting." The criteria have grown from three pages in 1972 to over 30 pages today. A review of the criteria indicates that the real criteria are still only about three pages long. Several approaches are being considered to simplify the criteria. These range from simplifying current criteria to a radical change which would involve relatively simple statements of standards with the visitors to determine whether the standards are actually being met. Chances appear good that a proposal for new criteria will be discussed this summer.

Although the criteria may be simplified, it will have a price in that more will be required of visitors and training will have to be improved. Even with the present criteria, improved training is needed with the new engineering design criteria, interim focussed visits rather than the 3V "full" visits, and new visit procedures which no longer require full reports from program evaluators.

*Submitted by Bill Kelly
Civil Engineering Division Vice-Chair*

CORRECTION

In the Fall Newsletter the phone number of Program Chair William Kelly was incorrectly listed. It should be (402) 472-8934 as corrected on p. 2.

ASEE CIVIL ENGINEERING DIVISION ANNUAL BALLOT

Biographical sketches (alphabetically) follow, and the formal BALLOT is on the last page of this Newsletter.

For Chair-Elect/Program Chair

Howard Dunn

Howard is Professor and Head of Civil Engineering at the US Coast Guard Academy in New London, CT. He has been at the Academy for seventeen years where he also served as Assistant Dean (1981-82) and Associate Dean of Academics (1982-84). He spent the academic year 1984-85, at the Air Force Academy as Distinguished Visiting Professor. He has been the Secretary/Treasurer of the CE Division ASEE for the past three years and has been campus activity coordinator at the Academy since 1979.

Howard has a BSCE and MSCE from the Virginia Polytechnic Institute and a PhD from The Pennsylvania State University. While at Penn State, he was an Instructor of CE and was promoted to Assistant Professor upon receipt of PhD. From 1975 to 1978 he served as Deputy Director, Overseas Construction for the Atlantic Division Naval Facilities Engineering Command. While with the Navy, he taught at night at Old Dominion University as an Adjunct Associate Professor.

David Hubly

David Hubly, PhD, PE is an Associate Professor of Civil Engineering at the University of Colorado at Denver and teaches classes on the treatment of water and wastewater, distribution of potable water, collection of wastewater, and water quality management. He has also served as Chairman of the Department. He has participated in the planning and presentation of ASEE annual conference programs for the last several years and is just completing a term as Director of the Civil Engineering Division.

His service to the civil engineering profession includes being President of the Rocky Mountain Water Pollution Control Association, RMWPCA; National Director of the Water Environment Federation, WEF, (formerly the Water Pollution Control Federation, WPCF); and several committee and special assignments for both of those organizations including the planning and presentation of the technical program at several WPCF annual conferences and an annual conference for RMWPCA. In the area of public service, Dr. Hubly has served on the Colorado Water Quality Control Commission which sets the water quality management policy for the State of Colorado.

For Director, 1995-98

J.P. Mohsen

J. P. Mohsen is an Associate Professor of Civil Engineering at the University of Louisville. He holds a BS, a Master of Engineering in Civil Engineering, and a MS in Engineering Management from the University of Louisville. He received a PhD degree from the University of Cincinnati specializing in structural materials.

Currently Director of the Materials Research Group at the University of Louisville, School of Engineering, Dr. Mohsen directs research projects in the field of pavement design, construction, and maintenance funded by the Portland Cement Association, American Concrete Pavement Association, Federal Highway

Administration, Massachusetts Aggregate and Concrete Producers Association, Kentucky Department of Transportation, and the City of Louisville.

He currently holds the office of the ASEE National Campus Representative Coordinator. He has held various offices in the ASEE Southeastern Section and is the immediate past-President of that section. Dr. Mohsen has served as the Southeastern Section Proceedings Editor since 1992.

James Nau

James M. Nau, Associate Professor of Civil Engineering, has been on the faculty at North Carolina State University since receiving his Ph.D. degree from the University of Illinois at Urbana-Champaign in 1982. He teaches undergraduate courses on basic mechanics (statics and dynamics), reinforced concrete, and structure steel design. At the graduate level, he teaches an advanced structural steel behavior course, and courses on structural dynamics and earthquake engineering. He has conducted research in these areas with support from the National Science Foundation and the U.S. Army Corps of Engineers.

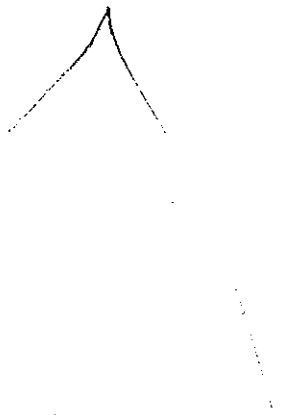
Jim has a keen interest in engineering education, and he is currently a principal investigator for a project sponsored by SUCCEED, an NSF Engineering Education Coalition. He is an active member of ASEE, serving as past Chairman of the Committee on Teaching Methodology for the Civil Engineering Division. He is also active in ASCE, serving on the Seismic Effects and Shock and Vibratory Effects Committees, and he is an Associate Editor for the *Journal of Structural Engineering*. He has received several teaching awards including an NCSU Alumni Distinguished Professorship in 1991 and the AT&T Foundation Award from the Southeastern Section of ASEE in 1989.

For Secretary/Treasurer

Vince Dmevich

Vince Dmevich received his BS and MS degrees in civil engineering from the University of Notre Dame, and completed the PhD degree at the University of Michigan. He was on the faculty at the University of Kentucky for 24 years where he progressed through the academic ranks, did a four-year term as Department Chairman, and served as acting Dean of Engineering for a year. In 1991, he was recruited to Purdue University as the Head of the School of Civil Engineering, one of the largest civil engineering programs in the country.

Construction and engineering design experience includes Ove Arup & Partners of London, England, and E. D'Appolonia Consulting Engineers, Pittsburgh, the Bureau of Reclamation, Denver, and the US Army Corps of Engineers, Vicksburg, MS. He is a registered PE in Kentucky and Indiana. Vince has been recognized for both his teaching and research by a number of national awards from the American Society of Civil Engineers, the American Society for Testing and Materials, and Chi Epsilon. He is active in many professional and technical organizations including the ASEE.



ASEE Civil Engineering Ballot

March 1995

Please clearly mark your choice with an "X":

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_____ James Nau
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