

American Society for Engineering Education

Civil Engineering Division



November 1999 Newsletter

Editor: Daniel J. McGinley

MESSAGE FROM THE CHAIRMAN

It is an honor to serve as the Chair of the Civil Engineering Division of ASCE for 1999-2000. Following the usual line of succession, I became Division Chair at the close of the Annual Conference last June. Thanks to **Alan Prasuhn** (Lawrence Technological University) for his capable leadership as Division Chair for 1998-99. Although Alan's official tour of duty is complete, he will remain active in the division, and he will be a source of valuable information and counsel to me this year. **Sam Clemence** (Syracuse University) is the current Program Chair, and he is already well along in the planning for the 2000 Annual Conference in St. Louis. Please mark your calendars for June 18-21, 2000 and plan to attend! Thank you, Sam, for your efforts on our behalf.

We had a terrific annual conference in Charlotte last June! As last year's Program Chair, I must confess that I approached the conference with some anxious moments, but what great food, drink, technical sessions, and camaraderie we enjoyed! And, what wonderfully cool weather we had-- most unusual for us here in the south. Some highlights:

Nearly 50 attended the RAP Session. Wow! **Tom Lenox** (ASCE) and **Donn Hancher** (University of Kentucky) ably served as RAP Session referees. Next year we plan to ask them to wear official referee jerseys and blow their whistles when the conversation heats up, or when we need to "change the subject." Donn had a blast!

The Social and Dinner was also a wonderful event with again nearly 50 in attendance. A major highlight was the presentation of the George Wadlin Award to **Donn Hancher**, a well-deserved honor to one who has served our Division so well and who is a great role model for our younger members. Congratulations, Donn.

One controversial issue did arise at the Social and Dinner. A special investigative unit of the US Military Academy, headed by **Steve Ressler**, uncovered a plot of false impersonation. It seems that

there were *two* **Bob Henrys** in attendance. After some debate and the presentation of all of the facts, the real Bob Henry could not be confirmed. We need the help of the entire CE Division membership to resolve the dispute. Please cast your vote:



Who is the real Bob Henry? Bob Henry #1 on the left or Bob Henry #2 on the right.

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MESSAGE FROM THE CHAIRMAN

(continued from page 1)

Of course, the annual conference is not all fun and games. I would like to thank last year's committee chairs who organized our four technical sessions: **Bob Henry** (University of New Hampshire), **Bob Tener** (Purdue University), **Steve Ressler** (United States Military Academy), and **Dennis Fallon** (The Citadel). All four sessions were standing room only! Thanks again for a job well done. Thanks in advance to the current committee chairs who are laboring to make St. Louis equally successful; I am particularly excited in Bob Henry's session on CE "Toys."

Since I was elected Program Chair in an even-numbered year (1998), I serve for two years on the Educational Activities Committee of ASCE. My service on EdAC involves several activities:

ASCE News Correspondent: I work with the ten constituent committees of EdAC to help get news-worthy items published in ASCE News. If you still have your copies of the News from September and October, you will note several significant items from EdAC's handiwork. The first ExCEED workshop earned front page coverage in the September issue. The Committee on Faculty Development (one of the ten constituent committees of EdAC) is working to make the next two ExCEED workshops even better. The announcement of the recently approved PEP award appears on page 11 of the same issue of the News. This award was proposed by the Committee on Faculty- Practitioner Interaction, currently a task committee of EdAC. Pages 7 and 8 of the October issue honor ASCE student chapter advisors and scholarship recipients. These efforts are the products of the Committee on Student Activities and the Committee on Scholarships.

Education and Practice Publications Committee: I serve as the EdAC Contact Member on this constituent committee of EdAC. The primary activity of EPPC is the production of the ASCE Journal of Professional Issues in Engineering Education and Practice. This refereed journal provides another venue for the publication of papers related to ASEE activities. The JPI seeks papers on a wide range of issues affecting education and practice in civil engineering including course content, curriculum development, teaching innovations, engineering history, engineering ethics faculty development, and EC 2000 criteria. Questions about potential submittals can be directed to **Mark Evans** (United States Military Academy). Mark is the current Editor of the Journal; he can be reached by phone at (914) 938-5502 or by email at im8670@trotter.usma.edu.

Well, I have rambled long enough. I look forward to working with you to make this year a successful one. Please email or call any time with any suggestions you have. I hope I have the opportunity to meet you at the RAP Session and the CE Social and Dinner next year in St. Louis.

I cannot close without thanking **Dan McGinley** (Institute for Professional Practice) for his time and skill in producing this newsletter. Dan, on behalf of the entire division, thank you for a job well done!

*Best regards,
Jim Nau
North Carolina State University*

P.S. A final thank you to a very special person, **Tom Lenox**. Thank you for your friendship and support in so many ways. There is no stronger advocate for civil engineering education!

GEORGE K. WADLIN AWARD

This award recognizes someone who made a major contribution to Civil Engineering education and has been a contributor to the CE Division of ASEE. Wadlin Award recipients have been:

1999 Donn Hancher

1998	Bill Wilhelm	1992	Colby Ardis
1997	Gerry Seeley	1991	Marvin Criswell
1996	Dan McGinley	1990	Ronald Eck
1995	Walt LeFevre	1989	Glen Martin
1994	Fred Beaufait	1988	Peter Hoadley
1993	James McDonough	1987	George Wadlin

CHI EPSILON CORNER

Chi Epsilon, the National Civil Engineering Honor Society with 123 chapters at colleges and universities throughout the United States, is a Member of the National Association of College Honor Societies

- ❖ The annual Chi Epsilon-ASEE Luncheon will be held in conjunction with the ASEE meeting in St. Louis, on Wednesday June 21, 2000: 12:30 to 2pm (# 3415)

*For more information, copies of publications, official jewelry, or to update your records, please contact:
Dr. Robert Henry, Secretary/Treasurer, Chi Epsilon,
UT-Arlington, Box 19316, Arlington, TX 76019-0316*

GLENN L. MARTIN AWARD

The 1999 Glenn L. Martin Best Paper Award went to **Paul Mathisen, Fred Hart, and Tahar Al-Korchi** for *Incorporation of Distance Engineering into an Introductory Freshman Undergraduate Course in CE.*

From the Program Chair

2000 ANNUAL MEETING IN ST. LOUIS... SLY2K?

We would like to "See you in St Louis!!" The Civil Engineering Division has a great array of technical sessions and social activities planned for the Annual Meeting in St. Louis. The first technical session of the conference is titled "Use of Computer Technology to Enhance CE Education". This session has traditionally had excellent speakers and papers. This year is no exception; we have received lots of excellent abstracts including topics on using the web for instruction in CE and other great ideas. Roger Ruggles is the moderator for this session... a great start for the week!

Wilfrid Nixon is moderating a session "Teams in Practice and Education" a topic that should interest all of us that will have ABET visits in the near future! Wilfrid received some very good abstracts and is lining up several excellent speakers to make this an exciting session. We will finish the first day off with the infamous RAP Session. It will be held at the Morgan Street Brewery in historic Laclede's Landing cobblestone streets and historic old buildings. We plan to give out some surprise gifts to some of the more vocally gifted members of our rap group, so don't miss it... lots of fine beverages and munchies!

Tuesday's session includes a technical program moderated by Jim Hanson entitled "CE2K Teaching Methodology for the New Millennium" This should give us all some new insights for teaching in the future. The Committee on Professional Practice is tackling the controversial topic of the first professional degree. Walter Vodrazka is assembling a panel that should generate a lively debate with audience participation—only plastic cups will be allowed at this session! Tuesday will wind up with a session jointly sponsored by the CE and Environmental Division "A Multi disciplinary Approach to Environmental Engineering" Kauser Jahan is moderating this session, which should be an interesting one. The Civil Engineering Social will be held at Tony Giotto's, an excellent restaurant within easy walking distance of the convention center Expect lots of fun and great food!

Wednesday's program will include the traditional Chi Epsilon Luncheon and that afternoon the really radical new concept proposed by none other than Bob "Civil Engineering TOYS Hands on Physical Models." You can't miss this session, Bob Henry and Toys, what a combination. It should really be an exciting finale to the conference.

But wait, there's more. The ASCE Committee on Curricula and Accreditation is sponsoring a Training Session on EC 2000 for CE Program Evaluators on Thursday June 22, 1999. The session will be an excellent opportunity for practitioners and educators to gain the training necessary to become a Program Evaluator, so sign up.

Everyone is working hard to make this the best conference of the new Millennium; so come and enjoy SLY2K !!!

*Sam Clemence
Syracuse University*

NCEES FE RESULTS (This data pertains to ABET accredited CE Program Examinees who took the exam while currently enrolled in school)

CIVIL PM		Apr 99	Oct 98
PM Subject	#Qs	%	%
Construction	3	47	46
Comp/Num Method	6	53	44
Enviromental	6	59	60
Hydraulics & Hydrol	6	54	43
Legal/Prof	3	79	91
Struct Analysis	6	48	60
Struct Design	6	41	57
Soils	6	53	43
Surveying	6	44	46
Transportation	6	41	56
Water Treatment	6	55	46

April 1999
2211 took the
Civil PM Exam
78.4% Passed
1911 took the
General PM Exam
76.6% Passed

October 1998
1491 took the
Civil PM Exam
80.3% Passed
1307 took the
General PM Exam
73.6% Passed

GENERAL PM		Apr 99	Oct 98
PM Subject	#Qs	%	%
Circuits	6	35	29
Chemistry	5	44	40
Computers	3	60	50
Dynamics	5	42	44
Economics	3	53	51
Ethics	3	63	76
Fluids	4	60	44
Math	12	47	49
Mat Sci/St Mat	3	45	62
Mech of Mat	4	38	42
Statics	6	61	71
Thermo	8	47	35

American Society of Civil Engineers

EXCEED ☆ ED CONGRESS ☆ FREE MEMBERSHIP ☆ ART

**Project ExCEED Announces
Summer 2000 Teaching
Workshops**



ASCE's Project ExCEED will continue into 2000 with ExCEED Teaching Workshops conducted July 9-14 at the U of Arkansas and July 30 – August 4 at West Point. Each of the workshops (targeting CE faculty with less than five years teaching experience) will accept 24 participants.

The \$1,000 registration fee will be waived for the 2000 Workshops. Travel and lodging expenses must be paid for by each participant's institution; however, participants will receive a \$300 stipend to help cover these costs.

Last summer's offering, at West Point, received rave reviews from participants. "The workshop was one of the best experiences I've had since becoming a faculty member," was the enthusiastic comment from Lois Schwarz of the U of Arkansas.

Applications (due 2/15/2000) are available at www.asce.org/exceed; or e-mail exceed@asce.org or call (703) 295-6267 for information.

**First Education Congress
Sees High Attendance**



The Education Programs Cmte of ASCE's EdAC kicked off the first-ever Civil Engineering Education Congress in conjunction with the 1999 Civil Engineering Conference & Exposition in Charlotte, NC.

The highly-attended program, organized by Jerry Rogers (U of Houston) and Ken Murray (NC A&T State U), included four days of sessions, forums, and special

events geared toward all CEs with an interest in education.

Special sessions on "National Developments in Engineering Education" and "The Masters as the First Professional Degree" each had more than 110 attendees; other Ed Congress sessions averaged 70 attendees. Almost 200 students registered for the three-day student program, organized by Martin Kane (UNCC), which included a civil engineering job fair and sessions on successful ASCE Student groups.

The Ed Congress also included an Effective College Teaching Seminar sponsored by Project ExCEED. Drs. Richard Felder and Rebecca Brent, co-directors of the Nat'l Effective Teaching Institute and nationally recognized scholars on effective teaching, presented the 1 1/2-day seminar, which had 48 registrants and was oriented toward improving the teaching skills of all CE faculty, regardless of experience. "Your seminar has strengthened my belief that spending time on and pursuing higher levels of teaching are worthy tasks equal to most any research project I have ever undertaken," said one participant.

Jerry Rogers (U of Houston) served as program chair for this year's Congress. At the program's final session, 1999 ASCE President Dan Turner presented Rogers with a plaque in recognition for his work in planning the successful program.

1999 Ed Congress Proceedings, including 34 papers, are available from ASCE for \$24 (ASCE mems). Some Ed Congress papers were published in the Oct. '99 dedicated issue of the Journal of Professional Issues in Engineering Education and Practice.

A high-quality education and student program is scheduled at every annual ASCE conference, including next year's conference in Seattle, Washington. Bill Highter (U of Massachusetts 413-545-3970 / highter@ecs.umass.edu) is Seattle Education Congress program chair.

**Faculty Advisor Reward
Program**



As a way to reward exceptional Student Chapter and Club Faculty Advisors, up to 50 will be selected for a year's free ASCE membership. Consideration for the program will be automatic based on information submitted by the Student Chapter/Club through their Annual Report.

**A New Poster Series for the
Next Millennium**



Commissioned by the EdAC and its Committee on Diversity and Career Guidance, with the support of the Alfred P. Sloan Foundation, ASCE is offering a new three-poster series: "Civilization", "Infrastructure" and "The Future." The set costs \$20 for members and \$30 for non-members.

*Tom Lenox
ASCE*

Visit ASCE on the World Wide Web
www.asce.org
EdAC maintains pages containing basic organizational information including a list of divisions/committees; how to join, staff information, benefits of participating in program activities, and grants information. In addition, the ASCE Site is linked to the ABET home page containing program criteria for architectural, civil, and construction engineering.

"Never has there been a time when the stakes were higher..." Delon Hampton, ASCE President-elect

PRACTITIONER EDUCATION PARTNER

ASCE Education Practitioner Partner Award

The first Education Practitioner Partner Award will be conferred by ASCE in October 2000.

"Never has there been a time when the stakes were higher for practitioners and educators to truly partner in enhancing the quality of our universities' CE programs." stated ASCE 2000 President Delon Hampton in support of the new award in a September 1999 *ASCE News* article.

The award will recognize practicing engineers for contributions to engineering education and encourage further contributions...to improve the quality of engineering education and further increase the dialogue between practice and academia.

Award nominations will be accepted from all members. The process will be announced this fall through ASCE Sections and Branches and posted on ASCE's Website (www.asce.org)

Richard Anderson, Chair of the Education Activities Committee of ASCE was quoted as saying, "The PEP award symbolizes the fact that engineering education is a shared responsibility between university educators and C.E. practitioners. By recognizing outstanding partners from practice, we are saying to

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In June of 1992, David Thompson* of Haley & Aldrich, Inc. wrote to Prof. Lewis Edgers at Tufts University "I would like to offer a course to be included as part of the civil engineering curriculum....The course deals with business issues in engineering practice." This offer began an educational adventure that has effectively introduced professional practice issues into the Tufts curriculum.

Tufts is a medium sized university located outside Boston, Massachusetts. The Civil & Environmental Engineering Department produces about thirty-five Bachelor of Science (ABET accredited) graduates and around fifty Master of Science graduates each year. Many of these graduates pursue careers in engineering consulting organizations. Some enter public service and construction and a few use their engineering education as a background to pursue careers outside of engineering, such as in law, business, development, etc.

The Tufts engineering curriculum has already introduced non-technical professional practice issues in a number of ways. Students may elect focus courses in such areas as accounting, engineering economy, policy, laws and regulations, and technical writing. An engineering management course introduces concepts of information management, planning, scheduling, budgeting, and design development and implementation. About twenty undergraduates per class take as many as five of these courses to form an engineering management minor. Continuing education courses, available to graduate students, present some of these issues particularly as they relate to environmental and hazardous materials management. The students are also exposed to professional practice issues in their capstone courses, required of all BSCE undergraduates and elected by some MS students. A few students obtain internships in local engineering firms.

However, there are many challenges. Because engineering degree programs are highly structured with many technical courses, few students are able to elect more than one or two of these focus courses. This is especially true of graduate students. Furthermore, the curriculum does not provide in any course, a meaningful survey of ALL the issues engineers encounter in their practice. The course offered by Mr. Thompson, since titled "Issues in Engineering Practice", satisfies this need.

The "Issues" course has been taught several times at Tufts and now alternates every other year with a legal issues course (discussed below). It consists of 26 one and one-half hour lectures, many of them provided by notable engineers from the local community. The course has been elected each year for full course credit, by more than twenty students, including undergraduate, graduate and continuing education students. The course texts are *Practice Management for Design Professionals* by John Bachner and *Subsurface Conditions: Risk Management for Design and Construction Management Professionals*, edited by David J. Hatem, Esq.

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ASCE Award

all practitioners that their roles in supporting educators are essential—and are highly valued.”

MILLENNIUM MUSINGS

After 2000 A.D., Civil Engineering graduates are going to need...

...communication and management skills that are at least as strong as their technical skills: without them, they'll end up working for a bunch of lawyers and MBAs at commodity work-rates.

*Wilfred Nixon
Iowa State University*

...knowledge from the past to secure the future.

*Bob Henry
UT-Arlington*

... an improved understanding of physical material behavior and visualization techniques as some of these skills become lost in a virtual world.

*Jim Hanson
Lawrence Tech*

WANTED

Person with a lot of energy to set-up and maintain a web page for the CE Division. Willing to consider a novice with a lot of enthusiasm and a "can-do" attitude or a very experienced hacker looking to add another notch in the old accomplishment gun. Compensation is comparable with other division leadership positions, so call today!

James M. Nau
CE Division Chair
Phone: (919) 515-7737
FAX: (919) 515-7908
E-Mail: nau@eos.ncsu.edu

PRACTITIONER EDUCATION PARTNER

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Other reading and written assignments are developed by the individual guest lecturers. David Thompson provides approximately one-half of the lectures, coordinates the course, and monitors and evaluates student progress.

Has the course succeeded? Overwhelmingly, by a number of measures. Student course evaluations rank this as one of the best courses offered by the Civil & Environmental Engineering Department at Tufts. The differing perspectives of undergraduate, graduate and continuing education students lead to lively interactions. Sample student comments include:

- ◆“This has been, without a doubt, the most informative and valuable course that I have taken here at Tufts.”
- ◆“The guest lecturers were incredible. The diversity and quality of the guest lecturers were overwhelming.”
- ◆“This class really taught me a lot about the issues that engineers face daily.”
- ◆“Every engineer should take this course as part of their education.”

In 1995, a full course on “Legal Aspects of Engineering Practice and the Construction Process” evolved from the professionals and the law lectures of the “Issues” course. David J. Hatem, Esq. of Burns & Levinson, taught the “Legal Aspects” course again in Spring 1997, with great success. Each of these two courses is now offered in alternate years.

A number of factors have contributed to the success of this educational initiative. With a healthy respect for practitioner concerns, the Tufts faculty have created some room in the curriculum and encouraged the students to take these courses. In fact, a recently developed Master of Engineering program will require students to take at least one of these courses. The practitioners, especially David Thompson and David Hatem, have invested enormous time and energy in these courses. However, the courses have enriched all of the participants, students and teachers.

*Lewis C. Edgers, PhD, PE
Tufts University*

*DAVID E. THOMPSON, PE, is the Chairman and CEO of Haley & Aldrich, Inc. Geotechnical Engineers/Environmental Scientists with offices in Massachusetts and nine other states. He has 30 years of experience in geotechnical engineering and has served as project manager or principle-in-charge of over 700 projects completed by the firm.

Mr. Thompson is currently on the Visiting Faculty at Tufts University and has been a Visiting Faculty member at MIT. He is a Past President of the ASFE: Professional Firms Practicing in the Geosciences and is a member of the Board of Directors of the Institute for Professional Practice (IPP)

Schools using IPP’s Issues in Professional Engineering Practice Coursenotes, such as Vanderbilt, Arizona, Cal Poly SLO, Maine, Louisiana Tech, Tennessee, CSU-Chico, Pittsburgh and Kansas have reported similar experiences.

LIFE IS A FREE BODY DIAGRAM

Edward A. Nowatzki, Ph.D., P.E.
University of Arizona

A couple of years ago, a group of civil engineering students asked me to write a "paragraph or two" for the ASCE Student Chapter monthly newsletter. When I asked them about the topic and the length of the article, they said I could write about anything so long as it fit into the space they had available. That plus the fact that they gave me a two-day deadline, tipped me off right away that they needed a "filler."

My first reaction was to ask them to pronounce the first two letters of my last name, but then I thought, "How can I reject the request of our future generation of civil engineers?" So I agreed; but now what to write. Many topics came to mind. For example, my work on the Apollo Lunar Landing Vehicle (LLV) in the mid 1960s; my 6-month sabbatical leave in South Africa in 1983 during the height of apartheid in that country; my experience in co-founding and growing a civil engineering consulting firm in Tucson four years ago, just before Ernie Smerdon asked to help him out with some administrative chores at the U of Arizona.

Although interesting, none of these experiences seemed appropriate. Then I tried to think about something all of us may have experienced to some degree and to which we could all relate. The "something" that came to mind was Statics and the concept of a Free Body Diagram (FBD).

Even though I took statics at Manhattan College in New York City long before most of the students I was writing for were born, the principles of mechanics that form the basis of statics remain unchanged. The one thing I remember about the course when I took it was the emphasis the professor placed on our being able to construct a correct FBD that could be used with the equations of equilibrium ($\sum F_x = 0$; $\sum F_y = 0$; $\sum M = 0$) to solve engineering problems.

The FBD was an obsession of his that I could not understand at the time. However, as my engineering career progressed, I began to realize the importance of the FBD. For example, it certainly helped me on my Ph.D. oral comprehensive examination when one of

the examiners asked me to use the full Navier-Stokes equations to describe the forces acting on a cloud above the Earth. My first reaction was to ask him to repeat the question since I couldn't believe what I had just heard. But things worked out OK once I drew a FBD. On another occasion, when I was working for a consulting firm in New Jersey, a contractor proposed an alternative to a design we had developed for a temporary retaining system in an excavation. We evaluated the proposed alternative design and found it to be inadequate because it was not in equilibrium. At a meeting with the architect (our client), the owner, and the contractor's engineer we tried to explain in layman's terms why the proposed alternative design was inadequate, but the contractor's engineer kept insisting that his alternative design was technically OK and that it would result in significant cost savings for the owner. The arguments went back and forth for almost an hour. Finally, to make our point, we asked him to draw a FBD of the proposed system. He did, and guess what, it was readily apparent from his own FBD that the proposed system was unstable. Yes, getcha! As I've grown older and experienced other situations where the FBD bailed me out technically, I realize that LIFE ITSELF IS A FREE BODY DIAGRAM. Let me explain.

Your obligations to your family, friends, employer, country, etc. make your life much more indeterminate and the forces pulling you in various directions become much greater in both intensity and number. Even the number and seriousness of the unexpected twists in your life seem to increase. But by then you are much more experienced in problem solving and have access to many different sources (almost like handbooks) to help you resolve the problems and keep your life in equilibrium.

However, you know you're in trouble when, regardless of what you do, you can't seem to balance the forces and moments and your life begins to move in directions that you never expected. When that happens you have a dynamics problem that can also usually be solved provided you "go with the flow" to maintain equilibrium, but the details of how you do that are outside the scope of this treatise.

When you are young there are many forces pulling you in many different directions. You may disagree with the next statement, but, in my opinion, life is relatively simple when you are young. In a sense, your life is like a simple FBD, i.e. it is relatively easy to resolve all of the forces acting in your life into components that you are familiar with, even though they may be acting in many different directions. You can then adjust your attitudes in time and space to accommodate those forces and maintain equilibrium in your life.

Sometimes, even when the forces driving your life are relatively simple, somebody throws you a curve ball or puts a spin on things you didn't expect that causes your life to go out of equilibrium. It's just like an applied moment. If that happens when you are young, you can usually restore equilibrium to your life by adjusting some of the other forces acting on you or by putting distance between you and the unexpected problem. Generally, things get a little more complex as you get older and advance in your career. You assume many more obligations and you must satisfy

Teaching Methodology Committee Approaches Industry

The emphasis of the Teaching Methodology Session this year (entitled CE2K: Teaching Methodology for the New Millennium) relates to adapting the classroom experience to include: interaction with industry and research in the classroom, using students as teachers, learning outside the classroom, and infrastructure issues in the classroom. I am pleased to report a representative from SYVERDRUP Civil Inc. has accepted an invitation to provide a presentation at the St. Louis Conference. Either H. G. Schwartz, Jr. or G. E. Brasser will present "Educational Needs Beyond a CE Degree: An Industry Perspective", which will complement the other speakers' (some "veterans" of the CE Division as well as some new faces) presentations

I hope that an emphasis on including invited speakers from industry will continue in the planning of future Teaching Methodology Sessions. The combination of academics and industry professionals should provide a thorough assessment of the entire educational experience and its impact on the profession. Practitioners' feedback on recent CE graduates' successes and limitations can help the Teaching Methodology Committee prioritize action items and topics for future activities and sessions.

Jim Hanson
Lawrence Tech

Computer Applications Committee Seeks to Integrate Toys

The Committee is trying to enhance not only the computer side of Civil Engineering education, but also the integration of hands-on educational toys with computer applications. At the St. Louis meeting the Committee will be sponsoring a poster session offering faculty an opportunity to display and discuss hands-on educational toys that they have found to be successful in their courses. It will give other faculty a chance to see what their colleagues are doing and help them generate ideas of their own.

The Committee would like to see this become an annual session. It is not too late to participate. Just contact Bob Henry (see p.9) directly to participate in this session. There is no paper needed for this session, but a page or two of how the educational toy is used would be very helpful.

Bob Henry
University of New Hampshire

many more constituencies than when you were young and life was relatively simple.

Your obligations to your family, friends, employer, country, etc. make your life much more indeterminate and the forces pulling you in various directions become much greater in both intensity and number. Even the number and seriousness of the unexpected twists in your life seem to increase. But by then you are much more experienced in problem solving and have access to many different sources (almost like handbooks) to help you resolve the problems and keep your life in equilibrium.

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Anyone interested in conducting an interview and preparing an article for future editions of the ASEE/CE Div Newsletter may contact the Editor at: bridges2k@aol.com

Professional Practice Committee Focuses on Teams

The Professional Practice Committee is planning a panel session at the 2000 ASEE conference. A couple of abstracts have been received and accepted. A panel is seen as especially valuable, since it provides a great chance for a sharing of ideas and insights from a broad range of people.

In other news, we are pleased to note the work being done in our sister organization (ASCE) by the Task Committee on Faculty-Practitioner Interaction, chaired by Robert Tener (Purdue). Two notable products include a draft ASCE policy statement entitled "Shared Responsibility for CE Education," and the creation of a new award, the National Practitioner Education Partner Award. Both should help to increase practitioner involvement in education - a critical need for the future health of the profession.

Wjff Nixon
Iowa State University

American Society for Engineering Education
Civil Engineering Division

1999-2000: Officers, Executive Committee, & Other Committees

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SUPPORTING COMMITTEES:

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ENGINEERS ARE DESTINED TO BE POOR

Engineers and scientists will never make it until money as business executives. Now rigorous mathematical proof that explains why this is true.

Product 1: Knowledge is Power
Product 2: Time is Money
AS every engineer knows
Work/Time = Power
Since Knowledge = Power, and
Time = Money, we have
Work/Money = Knowledge
Solving for Money, we get:
Work/Knowledge = Money

Thus, as knowledge approaches zero, Money approaches infinity, regardless of the Work/done. Conclusion: The Less You Know, the More You Make.

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ASEE Annual Conference 2000
June 18-21, 2000 in St. Louis, Missouri

A copy of the ASCE/CE Division Annual Meeting Minutes, Business Meeting Minutes and Treasurer Reports are available at:
<http://www.asce.org/volunteer/html/civil.htm>

Applied Ethics in Professional Practice

The Institute for Professional Practice has just released *Applied Ethics in Professional Practice*, which includes a 194 page guidebook for faculty who want to introduce ethics into their classes or practicing professionals who want to guide their staff in resolving ethical conflicts. A 96-page reader for the students is also available. Both of these publications coordinate with "Testing Water ...and Ethics", a 30-minute videotape (see ASEE letter below) that is also part of the IPP Ethics Education Program.

To prepare future professionals for "real-world" situations, it is necessary to:

- encourage frequent communications about ethics and business practices;
- provide opportunities to consider professional issues in a "safe" learning environment; and
- integrate "real-world" experiences into the formal education process.

The Applied Ethics in Professional Practice program has been developed to accomplish this. The modular format of the material facilitates practitioner visits to classrooms to validate ethical concerns, allows faculty to develop a full semester course on professional ethics and permits consulting firms to cover a specific issue during a "brown bag" seminar. The versatility of this material is the key to its success.

Copies of the Curriculum Guidebook and Reader are available from IPP for \$150. Copies of the video and accompanying workbook are also available for \$150 (college/university faculty may obtain single copies of the video for \$100)

*Sam Clemence
Syracuse University*

We have reviewed the ethics videotape produced by the Institute for Professional Practice, "Testing Water ...and Ethics", and find it to be a highly professional product. The videotape has great applications as a training tool for engineering students as well as professionals.

The American Society for Engineering Education advocates the use of the videotape, and we praise the efforts put forth by you and your colleagues.

*Sincerely,
John A. Weese, President
Frank L. Huband, Executive Director*

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Editor's Column PRACTICE.NOW?

"They do the same thing we hire consultants to do." With those words, the U Virginia's energy program manager summarized the first-year engineering design class's efforts to figure out the most cost effective and important upgrades to make selected campus buildings use energy more efficiently.

It is undeniably important to involve practitioners in curriculum design and course delivery; to expose students to engineering business practices and ethics; and to introduce role models and mentors to students.

ASCE has created a national award to recognize practitioner-education partnerships (see p.5). Many of the CE Division's presentations at the upcoming St. Louis Annual Conference will feature practitioner input. Developing educational programs "focused on creating an understanding of professional and ethical responsibilities encountered in professional practice" is the mission of my organization, IPP.

However, with all this input from, and exposure to professional practice, students are NOT practitioners ... and they are certainly not Professional Engineers.

Engineering students are still at the very beginning of their (hopefully long and prosperous) professional careers. They are not ready to assume the mantle of responsibility that comes with engineering practice.

In our zeal to prepare them for an engineering career we need to consider... Are students equipped with engineering fundamentals, despite pressures on the curriculum? Are students being prepared for a career or for their first job out of school? Is the concept of continuous lifelong learning being established and reinforced? If so, both education and practice will reap the benefits of their joint efforts.

Yet, even as we anticipate the rewards of real-time, real world engineering education, are we in some ways compromising our professional image? Are the students that design and build playgrounds and shelters for ASCE award-winning student chapters exposing themselves to professional liability? Can a first-year engineering design class do the same thing as engineering consultants?

*Dan McGinley
Editor*

THANK YOU for taking the time to read this newsletter AND for sending me your input. If you have suggestions, please call me at 973-857-6511 or send an e-mail to: Bridge2PE@aol.com

ASEE CIVIL ENGINEERING DIVISION—ANNUAL BALLOT

Biographical Sketches follow, and the formal BALLOT is located on the final page of this newsletter

For Chair-Elect/Program Chair

J.P. Mohsen, Ph.D.

J. P. Mohsen is an associate professor of Civil Engineering at the University of Louisville. He has served the ASEE Civil Engineering Division as a director for the last three years. He has also served as the ASEE national campus representative coordinator since 1994. He is a past president of the ASEE Southeastern Section and served as the Proceedings Editor from 1992 through 1998 and is currently serving as the Section Campus Coordinator.

Dr. Mohsen has also been active in ASCE as Editor, Technical Chair and General Chair of the Computing in Civil Engineering congress from 1994 through 1997.

For Director 2000-2003

Daniel J. McGinley

After receiving his B.S. degree in civil engineering from the New Jersey Institute of Technology, Dan McGinley joined the headquarters staff of the American Society of Civil Engineers. For sixteen years he managed programs in Student Services, Government Engineering, Membership and Education.

In 1996, Mr. McGinley was appointed Executive Director of the Institute for Professional Practice, which develops educational programs for science and engineering students/practitioners on professional and ethical responsibilities encountered in practice. He has served as a member of the TRB Engineering Expert Task Group, the Council of Engineering and Scientific Society Executives and the ASCE Task Committee on CE Education Initiatives. He has been an Alternate Commissioner on the AAES Engineering Workforce Commission and is the current Newsletter Editor for the ASEE CE Division.

Mr. McGinley is the 1996 recipient of the ASEE CE Division George K. Wadlin Distinguished Service Award and is listed in *Who's Who in America, 2000*.

ARE YOU MANAGEMENT MATERIAL?

So, this guy is flying in a hot air balloon and realizes he is lost. He reduces height and spots a man below. He lowers the balloon further and shouts: "Excuse me, can you tell me where I am?"

The man below says: "Yes, you're in a hot air balloon, hovering 30 feet above this field.

"You must work in Engineering", says the balloonist.

"I do" replies the man. "How did you know?"

"Well," says the balloonist, "everything you have told me is technically correct, but it's of absolutely no use to anyone!"

The man below says, "You must be a manager!"

"I am," replies the balloonist, "but how did you know?"

"Well," says the man, "you don't know where you are, or where you're going, but you expect me to be able to help. And, you're in exactly the same position you were in before we met, but now it's my fault!"

ASEE CIVIL ENGINEERING DIVISION—ANNUAL BALLOT

November 1999

Please clearly mark your choice with an "X":

For Chair-Elect/Program Chair: _____ J.P. Mohsen
Write-in: _____

For Director 2000-2003: _____ Daniel J. McGinley
Write-in: _____

PLEASE MAIL THIS ORIGINAL BALLOT TO:

Kamyar C. Mahboub
Civil Engineering Department
University of Kentucky
Lexington, KY 40506-0046

**PLEASE LEGIBLY SIGN THE
BACK OF YOUR ENVELOPE.
YOUR BALLOT NEEDS TO BE
RECEIVED BY
JANUARY 15, 2000**



CHAIRMAN'S QUIZ

Can you correctly identify the REAL Bob Henry? (circle your answer)

A. Bob Henry on the LEFT

B. Bob Henry on the RIGHT

(ignore the officious-looking uniformed gentleman in the middle)

SEE INSIDE FOR DETAILS

One controversial issue did arise at the Social and Dinner. A special investigative unit of the...

see Message from the Chairman, Page 1

We plan to give out some surprise gifts to some of the more vocally gifted members of our rap group...

see SLY2K, Page 3

The \$1,000 registration fee will be *waived* for the 2000 Workshops. Travel and lodging expenses must be paid for by each participant's institution; however, participants will receive a \$300 stipend to help cover these costs.

see ASCE, Page 4

This has been, without a doubt, the most informative and valuable course that I have taken here...

see Practitioner-Education Partner, Page 5

...it certainly helped me on my Ph.D. oral comprehensive examination when one of the examiners asked me to use the full Navier-Stokes equations to describe the forces acting on a cloud above the Earth.

see Life Is A Free Body Diagram, Page 7

Can a first-year engineering design class do the same thing as engineering consultants?

see Practice.Now, Page 11

ASEE Civil Engineering Division
November 1999 Newsletter

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08048 PCT 03/28/00
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The ASEE CE Division Wishes You
HAPPY HOLIDAYS!