

# American Society for Engineering Education

## Civil Engineering Division



December 1998 Newsletter

Editor: Daniel J. McGinley

### MESSAGE FROM THE CHAIRMAN

It is certainly a pleasure to serve as the Chair of the Civil Engineering Division during the current year. I am following in the footsteps of some outstanding leadership, and I can only hope that we continue to provide an active forum for civil engineering education. **Tom Lenox**, past CE Division Chair, who provided such distinguished leadership throughout the past year, has left his position as department head at USMA - West Point to become Director of Educational Activities at ASCE. I am confident that this means that we in the ASCE Civil Engineering Division will continue to receive the benefit of his interest in civil engineering education as well as an even closer link with ASCE educational activities.

**Vincent P. Drnevich** has stepped down as the Secretary-Treasurer of the Civil Engineering Division after three years of outstanding leadership and record keeping. However, we can count on his devoted service to engineering education as he continues to serve as the Chair of the ASCE Civil Engineering Department Heads Council.

The Civil Engineering Division had a most successful June 28-July 1, 1998 meeting in Seattle, Washington. Attendance was good, the discussions were lively, the weather cooperated, and everyone got plenty of exercise walking up and down hill to get to the off-site events at Seattle University and The Fisherman's Restaurant on the harbor. I want to express my gratitude to **Rolf Skrinde**, Chair of Civil Engineering at Seattle University for providing a most attractive site for our annual Rap Session providing liquid refreshments, and organizing a wide range of snacks. Past ASCE President, **Jim Poirot**, was the speaker at the annual Chi Epsilon Luncheon. Jim provided a unique worldwide overview of what was happening in sustainable development.

Speaking of the Rap Session, it has now been informally renamed the R.A.P. Session. Some thought was given to retaining the acronym, with the meaning ranging from Reflective, Alcoholic Pontification to Reflection, Attitude Adjustment, and Pontification. It appears that no one was able to reconstruct the final decision, which probably says

something in its own right. I believe that this will be considered further, elsewhere in this *Newsletter*.

I particularly want to take this opportunity to thank the four standing committee chairs for a job well done in organizing well-attended and informative technical sessions for the Seattle Conference. They are **Donn Hancher** (University of Kentucky), **Samuel Clemence** (Syracuse University), **Stephen Ressler** (US Military Academy), and **Robert Henry** (University of New Hampshire). Sincere thanks are also due **Kauser Jahan** (Rowan University), who organized a joint session with the Environmental Engineering Division, and **Dennis Fallon** (The Citadel) who served as a session moderator.

Next June we will meet in Charlotte, North Carolina. **James Nau**, Civil Engineering Division Program Chair, has completed the program planning, and we can count on an outstanding conference. You will be hearing much more about the 1999 meeting. Please start making plans to attend the conference.

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## See you in Charlotte, NC!

**MESSAGE FROM THE CHAIRMAN**

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In another vein, both ASCE and the ASEE Civil Engineering Division have endlessly discussed the need to get more practitioner involvement in civil engineering education. Some real progress has been made through ASCE Educational Activities Committee (EdAC), Committee on Curriculum and Accreditation (CC&A), and others. This has not translated into significant practitioner involvement at ASEE activities. There is clearly practitioner interest in civil engineering education – most civil engineering departments have advisory boards composed primarily of practitioners. The problem is that employers will not support travel to educational activities to the same extent as technical programs. Asking department heads with their own budget problems to support practitioner attendance is not feasible, but the argument weakens with respect to regional ASEE conferences and national conferences when located in your own area. Why is it not possible to get local practitioners to attend and participate in regional ASEE conferences? What about similar involvement by practitioners in the vicinity of our national conferences?

A number of workshops have been held, and more are planned, to prepare and train evaluators for Criteria 2000 visits. At present, CC&A (the committee that assigns civil engineering evaluators) is in need of more trained evaluators. Attendance at a workshop is a good starting point. Equally important, if you are facing an upcoming visit, participation in the training workshop provides excellent insight into the evaluation process.

Finally, I look forward, as ASEE Civil Engineering Division Chair, to communicating with many of you throughout the year. It would be particularly satisfying if I had the opportunity to meet all of the division at the 1999 Charlotte, North Carolina, ASEE Annual Conference.

*Alan Prasuhn PE*  
*Lawrence Technological University*

**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:

1998	<b>Bill Wilhelm</b>	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 was held in conjunction with the annual ASEE meeting in Seattle, Washington on July 1, 1998. **James Poirot**, who was president of ASCE in 1994, delivered an excellent presentation on "sustainable development." Afterwards, he lead a lively discussion on the topic for the 25, or so, attendees. Chi Epsilon legacy, Dr. **Al Ingersoll**, filled in as session moderator for Dr. Bob Henry, National Secretary/Treasurer, and displayed the publications and official organization jewelry.
- ❖ Chi Epsilon awarded more than **\$10,000 in scholarships** during 1998. XE congratulates all of the candidates and expresses appreciation for the alumni contributions that have made these scholarships possible. Continued support will enable XE to endow the scholarships and increase the stipend.
- ❖ Dr. **William J. Hall**, Professor Emeritus at the University of Illinois was elevated to National Honor Member. Dr. Hall is only the 54<sup>th</sup> civil engineer so honored in XE's seventy-five year history. A full report on Dr. Hall's elevation is featured in the fall TRANSIT.
- ❖ The **University of Wisconsin-Madison** chapter will host the 36<sup>th</sup> National Chi Epsilon Conclave on March 2-4, 2000.

*For more information, copies of publications, official jewelry, or to update your records, please contact:*

Dr. Robert Henry, National Secretary/Treasurer  
Chi Epsilon  
University of Texas-Arlington  
Box 19316  
Arlington, TX 76019-0316

**GLENN L. MARTIN AWARD**

The 1998 Glenn L. Martin Best Paper Award went to Alexandre Cabral, Rolland Viau and Denis BJ Dard for *Situated Learning and Motive Strategies to Improve Cognitive Learning in CE.*

Leadership Forum

# A CONVERSATION WITH HENRY MICHEL

**ASEE/CE: What do you think are some up and coming civil engineering research needs?**

CERF has published a series of reports describing some research goals. The reports include:

- "Setting a National Research Agenda for the Civil Engineering Profession" (August 1991)
- "Materials for Tomorrow's Infrastructure: A Ten-Year Plan for Deploying High Performance Construction Materials and Systems" (December 1994)
- "Construction Industry Research Prospectuses for the 21st Century" (February 1996)

This last report is a written proceedings from a CERF-sponsored conference in Washington, D.C. The report describes an agenda of research based on these focus areas:

- Management and Business Practices
- Design Technology and Practices
- Construction and Equipment
- Materials and Systems
- Public and Government Policy

For each focus area, a series of abstracts are included which describe different research goals. For example, the eighth Materials abstract is "Developing the Discipline of Renewal Engineering", which concerns developing the knowledge base and methods of engineering application for reconstruction and reuse of existing facilities. Each abstract includes a description of objective, background, recommended solutions, resources, schedule and expected benefits from the research work.

Overall, this CERF report gives an order of magnitude estimate for costs of the various identified research needs, schedule, and potential partners to sponsor the work.

**ASEE/CE: In the past, practicing engineers have not been involved much with research. Should this change?**

It is partly true to say that practicing engineers have not been involved much with research. In the past, most research by practicing engineers has been project driven. From my experience with Parsons Brinckerhoff, for example, we had developed and designed a special joint detail for the BART Transbay tubes to allow for potential seismic movement. This applied research was prompted by a specific project requirement. The firm also sponsors the William Barclay Parsons Fellowship program, an annual competition in which engineers propose an applied research project. This program has sponsored projects which tend to focus on advances to applied

engineering practices and procedures. The program has led to some notable work in HOV design and tunnel rehabilitation methods.

These and other examples aside, however, it is difficult for practicing engineers to be directly involved in research. The compensation system for consulting engineering services doesn't leave much room for discretionary expenditures such as research. Also, most practicing civil engineers work for small companies that don't have the resources to support research work.

**ASEE/CE: Has CERF helped to bridge the gap between practicing engineers and academicians?**

By itself, CERF cannot close the gap between practicing engineers and academicians. CERF does help by promoting more communication between the two, and by providing opportunities for projects where practitioners and academicians can both contribute.

*Welcome!*

*This is a new column featuring the thoughts of civil engineering's foremost leaders. In our inaugural article we present a dialogue with Henry Michel, Chairman Emeritus for CERF, the Civil Engineering Research Foundation*

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Leadership Forum

**A CONVERSATION WITH HENRY MICHEL**

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CERF's strategy in part has been to look beyond traditional A/E sources to other industries active in research that potentially benefits construction. For example, Global Positioning System technology was not originally developed by civil engineers. GPS methods, however, are of great benefit to civil engineering projects. Likewise, CERF seeks to develop connections between other industries, and help guide the application of resources for study and resources. When CERF succeeds in this way, new opportunities are available for practicing civil engineers and academicians. This helps to involve both sides in contributing to the work.

**ASEE/CE: Does CERF play a role in helping the U.S. to be competitive in the emerging global economy?**

CERF has been active in seeking international input. CERF has recently sponsored three study missions.

As part of a mission to evaluate Japanese practice, the lesson learned was that Japanese are able to bring research into practice faster than in U.S. Here in the U.S. we have 50 state codes, 3 national codes, 40000 local codes, and all sorts of political issues to deal with. It takes on average 10 years for new products to be accepted in practice. In Japan it takes 2 years.

In part as a response to the lesson, CERF arranged with FHWA to set up a testing procedure as part of "HITEC" the Highway Innovation Technology Evaluation Center. Products and procedures approved by HITEC receive AASHTO approval, thus speeding up the process.

CERF has also sponsored missions to Europe and Asia. Also, in 1994, CERF sponsored a symposium in Washington, D.C. to develop a research agenda. Of the over 700 attendees, 300 were from outside the U.S.

CERF considers part of its agenda to help overcome our parochialism in civil engineering and construction. Success at this goal definitely contributes to the U.S. ability to compete in the world marketplace.

**ASEE/CE: How would you characterize your experiences with CERF to date? Can you suggest any "lessons learned" for the organization's future success?**

I was very excited and glad to participate in the creation of CERF. As a past Chairman, I've seen the organization grow and reach out to different industries. In the future, CERF intends to continue to branch out, to involve participation from the insurance and finance sectors, two industries with potentially great interest in improving civil engineering practice and construction.

The "lessons learned" so far: continue to improve the dialogue between researchers and practicing engineers; continue to reach out to non-traditional sources for participation in research; and continue to call for an organized research agenda to address A/E problems and meet the needs of civil engineering and construction.

**ASEE/CE: Thank you!**

**AND THANKS TO...**

*The ASEE/CE Division extends a special "thank you" to Brian Brenner, of Bechtel/Parsons Brinckerhoff for preparing this article. Brian is the Associate Editor, ASCE Journal of Professional Issues in Engineering Education and Practice and Chair of the Civil Engineering Practice Editorial Board of the Boston Society of Civil Engineers Section/ASCE. Articles for either of these publications are encouraged and may be submitted to Brian at: BRBRENNE@bigdig.com*

*Anyone interested in conducting an interview and preparing an article for future editions of the ASEE/CE Div Newsletter Leadership Forum column may contact the Editor at: Bridge2PE@aol.com*

**ENGINEERS ON HONESTY**

Engineers are always honest in matters of technology and human relationships. That's why it's a good idea to keep engineers away from customers, romantic interests, and other people who can't handle the truth.

Engineers sometimes bend the truth to avoid work. They say things that sound like lies but technically are not because nobody could be expected to believe them.

The complete list of engineer lies includes:

- "I won't change anything without asking you first."
- "I'll return your hard-to-find cable tomorrow."
- "I have to have new equipment to do my job."
- "I'm not jealous of your new computer."

ASCE Annual Meeting - Boston, MA - October 18-22, 1998

## FIRST PROFESSIONAL DEGREE

*Following are the edited comments of Dr. Jim Yao (Texas A&M) on some of the ASCE Education Track sessions and other convention events:*

### Credit Hours

**Bob Elliott** (U. of Arkansas) made a survey of 52 CE Depts. He found that 32.4% of these require less than 130 hours to graduate, 50.0% between 130 and 136 hours, and 17.6% greater than 136 hours. Some 15 departments said they are under pressure to further reduce credit hours for graduation (6 from state legislatures, 7 from university administrations, 1 from the Dean of Engineering, and 1 from peer institutions).

### Scholarship Redefined

The Task Force on Redefining Scholarly Work presented their report entitled "The Scholarship Landscape in Civil Engineering: A Bridge Between Rhetoric and Reality" (<http://www.asce.org/peta/ed/redefschol.html>).

**Vince Drnevich** (Purdue Univ) appointed the Task Force in 1997, **Amir Al-khafaji** (Bradley U) chaired it, and **Mike Kupferman** (ASCE) issued the well-done report.

### CE Ed Beyond 2000

**Jim Yao** (Texas A&M), **Bill Kelly** (Catholic U) and **Marshall Lih** (NSF) presented their papers to a capacity crowd of 75+. The papers and 20 discussions are available at <http://lohman.tamu.edu> and click on "Forum" and on "convention" Written discussions (in MSWord) can be sent to [jtyao@tamu.edu](mailto:jtyao@tamu.edu) for addition to the existing file for continued discussion. All authors are urged to respond to these discussions which will be included in an additional section entitled "authors' response" by the end of this year.

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In a much-anticipated action, the ASCE Board of Direction has approved the following policy statement concerning engineering education:

### POLICY

The American Society of Civil Engineers (ASCE) supports the concept of the Master's degree as the First Professional Degree for the practice of civil engineering at a professional level.

ASCE encourages institutions of higher education, government units, employers of civil engineers, and other appropriate organizations to endorse, support, and promote the concept of mandatory post-baccalaureate education for the practice of civil engineering at a professional level. The implementation of this effort should occur through establishing appropriate curricula in the formal education experience, appropriate recognition and compensation in the workplace, and congruent standards for licensure.

### ISSUE

The civil engineering profession is undergoing significant, rapid, and revolutionary changes making the baccalaureate civil engineering degree an entry level degree that is inadequate preparation for the practice of civil engineering at the professional level. These changes include:

1. Globalization has challenged the world-wide geographic boundaries normally recognized in the past, primarily as a result of enhanced communication systems.
2. Information technology has, and continues to make, more information available; however, the analysis and application of this information is becoming more challenging.
3. The diversity of society is challenging our traditional views and people skills.
4. New technologies in engineering and construction are emerging at an accelerating rate.
5. Enhanced public awareness of technical issues is creating more informed inquiry by the public of the technical, environmental, societal, political, legal, aesthetic, and financial implications of engineering projects.
6. Civil infrastructure systems within the United States are rapidly changing from decades of development and operation to the renewal, maintenance, and improvement of these systems.

These changes have created a market requiring civil engineers to have simultaneously greater breadth of capability and specialized technical competence than that required of previous generations. For example, many civil engineers must increasingly assume a different primary role from that of designer to that of team leader. This changing market and role for the civil engineer can be addressed by appropriate, formal post-baccalaureate education among other fundamental requirements.

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Inside the NSF

Ron Sack (NSF) described relevant programs on education as follows (<http://www.nsf.gov>):

- ❖ Equal emphasis on research and education for career awards.
- ❖ Action Agenda for Systemic Engineering Education Reform (successor to Engineering Coalitions) - 100k to 600k per year for 3 years (talk to Ernie Smerdon ([esmerdon@nsf.gov](mailto:esmerdon@nsf.gov), 703-306-1380) about this program).
- ❖ Cross-disciplinary synthesis (discovery to proof-of-concept undergraduate and graduate) including infrastructure systems, environmental systems, transportation systems, building systems, and constructed facility systems.
- ❖ Opportunities for civil engineering research include microsensors/actuators (MEMS), biomimetics, and manufactured systems.

Diversity and Guidance

An interactive CD-ROM entitled "Careers for Civil Engineers" from the Sloan Career Cornerstone Series ([www.careercornerstone.org](http://www.careercornerstone.org)) debuted along with the following established programs and resources:

- Purdue University Women in Engineering Program (WIEP) ([fairway.ecn.purdue.edu/wiep](http://fairway.ecn.purdue.edu/wiep))
- Massachusetts Pre-Engineering Program (MASSPEP) ([www1.usa1.com/masspep](http://www1.usa1.com/masspep)),
- Mentor Net (The National Electronic Industrial Mentoring Network for Women in Engineering and Science ([www.mentornet.net](http://www.mentornet.net)),
- E-mentoring (contact Prof. Sara Wadia-Fascetti at [swf@neu.edu](mailto:swf@neu.edu) and [sca.coe.neu.edu](mailto:sca.coe.neu.edu)),
- NSPE (contact Marla Berman at [mberman@nspe.org](mailto:mberman@nspe.org)), and
- Boston Society Section / ASCE ([www.engineers.org/bssces](http://www.engineers.org/bssces)).

*A lot of information on career paths and mentoring are available through the above Internet addresses.*

**FIRST PROFESSIONAL DEGREE**

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RATIONALE

Increased educational requirements beyond the baccalaureate degree for the practice of civil engineering at the professional level are consistent with other learned professions. The body of knowledge gained, and the skills developed in the formal civil engineering education process, are not significantly less than the comparable knowledge and skills in these other professions. Is it reasonable in such complex and rapidly changing times to think that we can impart the requisite engineering knowledge and skills in four years of formal schooling while other learned professions take seven or eight years? Four years of formal schooling were considered the standard for three professions (medicine, law, engineering) 100 years ago, and while medicine and law education lengthened with the growing demands of their respective professions, engineering education did not. Perhaps this retention of a four-year undergraduate engineering education has contributed to the lowered esteem of engineering in the eyes of society, and the commensurate decline in compensation of engineers relative to medical doctors and lawyers.

Current baccalaureate programs, while constantly undergoing review and revisions, still retain a nominal four-year education process. This length of time limits the ability of these programs to provide a formal education consistent with the increasing demands of the practice of civil engineering at the professional level. There are diametrically opposed forces trying to squeeze more content into the baccalaureate curriculum while at the same time reducing the credit hours necessary for the baccalaureate degree. The result is a production line baccalaureate civil engineering degree satisfactory for an entry level position, but inadequate for the professional practice of civil engineering. The four-year internship period (engineer-in-training) after receipt of the BSCE degree cannot make up for the formal educational material that would be gained from a master's degree program.

The implementation of this concept will not happen overnight, nor can ASCE will that it be done in a specified time period. This concept is a legacy for future generations of civil engineers. However, perhaps the most important aspect of the implementation of this policy is already in place. Within the U.S. system of higher education, high quality, innovative and diverse master's degree programs currently exist in colleges and universities to support this concept. The active support of this policy by all the stakeholders in this process, such as the educational institutions, the registration boards, and the various employers of civil engineers, will be required to develop and promote the elements necessary to eventually implement this concept.

Watch *ASCE News* and Civil Engineering magazine for more about this policy. Comments or questions may be addressed to:

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A copy of the ASEE/CE Division Annual Meeting Minutes,  
Business Meeting Minutes and Treasurer Reports are available at:  
<http://ce.ecn.purdue.edu/~drnevich/asee/>



The Trueteel Affair... Gilbane Gold...

## Testing Water ...and Ethics

*"The videotape captures the essence of engineering and will serve as an excellent training tool for civil engineering students and the profession."*

American Society of Civil Engineers  
August 26, 1998

The ABET 2000 Criteria states (Criterion 3. Program Outcomes and Assessment) "Engineering programs must demonstrate that their graduates have...(f) an understanding of professional and ethical responsibility." Now the Institute for Professional Practice (IPP), a non-profit engineering society dedicated to helping engineering students and recent graduates in their professional development, has produced a 28-minute video addressing just this issue: Testing Water ...and Ethics.

In the six months following its debut at the ASFE Annual Meeting in April, 1998, "Testing Water ...and Ethics" has appeared at the ASEE Meeting in Seattle, the ACIL Meeting in San Francisco and the ASCE Meeting in Boston. It has been the feature presentation at CEC meetings in Denver and Atlanta and the Wisconsin Society of Professional Engineers.

Expressions of support have been received from the American Society of Civil Engineers (ASCE), the National Society of Professional Engineers (NSPE), The National Institute for Engineering Ethics (NIEE) and the Junior Engineering Technical Society (JETS), among others. *Over 100 copies* were purchased and distributed to firms insured by the Terra Insurance Company.

Copies of the video and accompanying workbook are available from IPP. The program costs \$150, but college/university faculty may obtain single copies for \$100. Contact IPP at 1-888-IPP-2723.

Sam Clemence  
Syracuse University

PS: IPP is developing a new instructional module entitled *Applied Ethics in Professional Practice* which will be available in the spring of 1999.

### INSTITUTE FOR PROFESSIONAL PRACTICE

13 Lanning Road ■ Verona, NJ ■ 07044-2511

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Editor's Column

## ARE WE EDUCATING HEROES?

Who are your heroes? *Esquire* magazine recently carried an editorial advocating the need for heroes. The lyrics of a song from the current Broadway hit musical "Footloose" state "I need a hero...". Back when the hazardous waste cleanup superfund was announced, *ENR* and *Civil Engineering* magazine covers featured a Superman-like (i.e. hero) character.

*Modern Marvels* is a wonderful show on cable TV's History Channel. Most shows feature a renowned civil engineering project, like the Panama Canal, the Brooklyn Bridge or Hoover Dam. As the technical triumphs and political underpinnings are reported, it becomes evident that *civil engineers* (de Lessups, the Roeblings, and Frank Crowe) made it all happen.

At the Geo Congress '98 Symposium on Judgement and Innovation: The Heritage and The Future of the Geotechnical Engineering Profession, Professor Ralph Peck (who many consider a hero) gave an excellent speech entitled "Are the Glory Days Behind Us?" Although many applications were made in new areas such as environmental engineering and offshore technology, essentially, no "ground-breaking" discoveries have been made in recent years.

ABET's latest overhaul of the engineering program criteria could be construed as an attempt to produce more graduates capable of distinguishing themselves. Similarly, a recently adopted ASCE policy supports the Master's degree as the First Professional Degree for the practice of civil engineering at a professional level. It notes that civil engineering is "undergoing significant, rapid, and revolutionary changes" that have "created a market requiring civil engineers to have simultaneously greater breadth of capability and specialized technical competence than that required of previous generations"—like the Roeblings?

Hero.com and Hero.org ( I didn't even try hero.gov) offer no assistance. With today's emphasis on ethics, role models, mentoring, professional image, technical specialization, and expanded curriculum, I just have to ask... who are your heroes?

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

Dan McGinley  
Editor

## 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

Samuel P. Clemence, Ph.D., PE

Dr. Clemence joined the Syracuse University Department of Civil and Environmental Engineering in 1977 as an associate professor. His previous academic service was at the University of Missouri-Rolla from 1973-1977. Prior to entering academics, he was employed by several consulting firms and served six years as a Naval Officer in the U.S. Navy Civil Engineer Corps. He supervised engineering and construction projects in Vietnam, Thailand, the South Pacific, Spain, and the United States.

Professor Clemence is a Fellow in the American Society of Civil Engineers, a member of Chi Epsilon and Sigma Xi, and was elected to Tau Beta Pi as an Eminent Engineer in 1977. He has received Outstanding Teacher Awards at the University of Missouri-Rolla (1974-75, 1976-77) and at Syracuse University (1988-89). He was selected as the 1990 Scholar/Teacher of the Year at Syracuse University by the Division of Higher Education and Ministry of the Methodist Church. Dr. Clemence received the 1988 "Outstanding Educator Award" from the St. Lawrence Section of the American Society for Engineering Education. He served as senior associate dean of the L.C. Smith College of Engineering and Computer Science from 1991-1996. He is the editor of two books and author or co-author of over fifty technical publications. Dr. Clemence received his Ph.D. in Civil Engineering from the Georgia Institute of Technology in 1973.

Professor Clemence's area of specialization is Geotechnical Engineering/Soil Mechanics and Foundation Engineering. He has taught undergraduate courses in basic soil properties, foundation design, and soil testing. He has developed and taught graduate courses in advanced soil testing, soil stabilization, rock mechanics and advanced foundation design. Professor Clemence participated in a Mellon Foundation Grant for Integration of Liberal and Professional Education through the Honors Program, 1984-87. As a result, he has developed a general engineering course entitled "Technology: past and Present," which focuses on the history and heritage of technology and its impact on society. He has developed a Pre-collegé Program in Engineering for high school students through the Syracuse University Division of Summer Sessions. He is also an active participant and visitor for the Accreditation Board for Engineering and Technology (ABET). Dr. Clemence's research specialization is in the design and field application of soil anchors, basic properties of soils, and properties of collapsible soils.

### For Director 1999-2002

Vincent R. Drnevich, Ph.D., PE

Vince Drnevich, a native of western Pennsylvania, received his B.S. and M.S. degrees in civil engineering from the University of Notre Dame. He completed the Ph.D. degree at the University of Michigan where the late F.E. Richart, Jr. was his mentor. (Dr. Richart is acknowledged to be the father of modern soil dynamics.)

Professor Drnevich 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 named Professor and Head of the School of Civil Engineering at Purdue.

At a number of points in his career, he obtained experience in construction (his father's firm) and engineering design (Ove Arup & Partners of London, England, and E. D'Appolonia Consulting Engineers, Pittsburgh, the Bureau of Reclamation, Denver, and the U.S. Army Corps of Engineers, Vicksburg, MS.) He is a registered professional engineer in Kentucky and Indiana.

He is well known for his work in developing and standardizing resonant column test apparatus that uses wave propagation methods to measure the modulus and damping behavior of soils. Over a hundred apparatus are in use worldwide. He was co-principal investigator on a long-term, earthquake hazard reduction project for the Kentucky Transportation Cabinet in the 1980's. His current research interests include use of electromagnetic waves for measurement of soil properties and a patent for this work was just issued.

Vince Drnevich is currently the Chair of ASCE's Department Heads Council Executive Committee. He 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 (national civil engineering honor society).

ASEE CIVIL ENGINEERING DIVISION—ANNUAL BALLOT  
December, 1998

Please clearly mark your choice with an "X":

For Chair-Elect/Program Chair: \_\_\_\_\_ Samuel P. Clemence  
Write-in: \_\_\_\_\_

For Director 1999-2002: \_\_\_\_\_ Vincent R. Drnevich  
Write-in: \_\_\_\_\_

PLEASE MAIL THIS ORIGINAL BALLOT TO:

Alan L. Prasuhn  
Civil Engineering Department  
Lawrence Technological University  
21000 West Ten Mile Road  
Southfield, MI 48075-1058

PLEASE LEGIBLY SIGN THE  
BACK OF YOUR ENVELOPE  
YOUR BALLOT NEEDS TO BE  
RECEIVED BY  
**JANUARY 29, 1999**

**R A P R A P R A P R A P R A P**

Rap Session: If the words conjure up an image of 40-50 sliderule-toting men sitting in a large circle, then you need to read on. The ASEE/CE Division's annual sessions are actually one of the Annual Meetings' *best kept secrets!* Always well-attended, these sessions provide a forum for informal discussion of many of the biggest issues facing civil engineering education. What's more, everyone has the opportunity to participate equally, without regard to experience, stature or rank. At the meeting in Seattle, some of the topics given air time were: Masters as the 1<sup>st</sup> "Professional Degree"; ABET 2000 Requirements; Senior Design Capstone Course; Lab Design; Faculty Morale; and Attracting More Women And Minorities Into Civil Engineering.

Whiles the sessions are great, the name is an anachronism. Some thought was given to retaining the acronym, R.A.P. Session, with the meaning Reflective Alcoholic Pontification or Reflection, Attitude Adjustment, and Pontification. But a totally new name isn't out of the question. **We'd like your suggestions for a new name that accurately and concisely describes this Vibrant InterActive Gathering of Responsible Academicians** (oops, can't use that one either). The most appropriate title suggested will be determined by the Executive Committee. The member submitting the winning suggestion (first) will receive a complimentary Executive Board Meeting Breakfast in Charlotte (no travel, no hotel, no incidentals, no substitutions... just breakfast). Thanks for taking the time to help!

MY SUGGESTION IS: \_\_\_\_\_

I HAVE PARTICIPATED IN \_\_\_\_\_ RAP SESSION(S)... AND *WILL / WILL NOT* BE IN CHARLOTTE.

If your address label has been removed from the back of this sheet, simply write your name and ID# on the back.

# SEE INSIDE FOR DETAILS

This has not translated into significant practitioner involvement at ASEE activities.

*see Message from the Chairman, Page 1*

...succeeds in this way, new opportunities are available for practicing civil engineers and academicians. This helps to involve both sides in contributing to the work.

*see A Conversation With Henry Michel, Page 3*

ASCE encourages institutions of higher education, government units, employers of civil engineers, and other appropriate organizations to endorse, support, and promote the concept of mandatory post-baccalaureate education for the practice of civil engineering...

*see First Professional Degree, Page 5*

The videotape captures the essence of engineering and will serve as an excellent training tool for civil engineering students and the profession.

*see Testing Water...and Ethics, Page 9*

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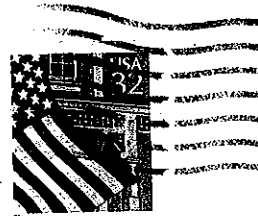
*see Are We Educating Heroes?, Page 9*

*Rap Session.* If the words conjure up an image of 40-50 sliderule-toting men sitting in a large circle, then ...

*see Rap Ballot, Page 11*

ASEE *Civil Engineering Division*  
December 1998 Newsletter

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