AEESP Newsletter
Association of Environmental Engineering and Science Professors

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In this issue...

Call for Papers

2002 AEESP/AAEE Conference

August 11-13, 2002
University of Toronto
Toronto, Canada

"Integrated Environmental Teaching, Research and Practice: Linking Engineering & Science to Address Complex Problems"

Deadline for abstracts: Feb. 1, 2002

see page 20

President's Letter

Dear Colleagues,

I am honored to have been elected President of this organization, as I have been a proud member of AEESP since I began my academic career. To paraphrase a fellow Board member, AEESP is the one organization to which I truly feel I belong. I hope to sustain the progress we have made in many areas, while pursuing new opportunities to serve our members and to advance our profession. Following are some of the areas on which I think we should focus this year.

Our annual meeting and reception at the WEFTEC conference in October was well attended, as usual. While it is important for us to continue holding receptions at WEFTEC, we should ask ourselves whether this should be the primary meeting place for the broader membership. We aspire to represent environmental engineering and science in the broadest sense, yet there is no venue at which all of us can meet. Most of you probably know that our periodic conferences will now combine education and research, and in a survey of the membership taken last year there was strong support for a two-year conference cycle. In the past, these conferences have been attended by a relatively small fraction of our members. Last year, Robin Autenrieth asked me to chair a task force to investigate the desirability and feasibility of an AEESP-sponsored national conference on environmental engineering and science, a broader and more inclusive version of our previous conferences. Our task force will finish its work this year, but regardless of its outcome I believe we would benefit from forming a standing committee on conference planning. We need a more standardized approach to conference planning if we are to commit to a two-year frequency.

It is very difficult to find accurate demographic data for environmental engineering, from the number of environmental engineers in the workforce to the number of graduate students in environmental engineering programs. To illustrate my point, a recent report on enrollments in civil and environmental engineering (based on 1999 Engineering Workforce Commission data) indicated that there are no graduate students in environmental engineering at over 30 major universities in which we have members (see the accompanying table on the following page). This is only one of the ways in which environmental engineers are simply not being counted accurately. The EWC does not generally publish statistics on environmental engineers, even though they do so for much smaller engineering disciplines. The National Science Foundation categorizes environmental engineering inconsistently and, based on some of the numbers I have seen, incompletely in its statistical reports. Accurate demographic data are important for two reasons. First, there is a correlation between the size of a profession and its influence in public policy, and we are allowing ourselves to be seen as much smaller than we are. Second, benchmarking is an important component of decision-making at both local and national levels. To address this issue, I plan to ask the Board to create a standing committee on demographics in environmental engineering. We should capitalize on the efforts of other organizations, such as NSF and EWC, that are already in the business of counting people by discipline, but there are other ways in which our membership would benefit from a periodic re-assessment of demographic characteristics in environmental engineering and science education.

The recent leadership of this organization has done an outstanding job of re-establishing connections with government agencies, and our involvement in Washington is perceived to be important by many of our members. As I recently mentioned in the cover letter that accompanied the annual membership dues notice, we have had to curtail our relationship with our Washington consultant, Kathi Ream, because of budget constraints. Kathi has helped us enormously by creating and facilitating connections with key people, so I hope we can continue to call on her when we need such help. We have benefited by the presence of one of our members, Nick Clesceri, in a program director position at NSF, and I would like to maintain our visibility at NSF well into the future. However, we also need to turn our attention to EPA, which in my view has allowed its historical role in supporting environmental engineering education and research to atrophy. Overall we would benefit from a more coordinated and systematic approach to our activities in Wash-

(continued on page 2)

Format for submissions

Submissions should be sent electronically to: Amy E. Childress, amyec@unr.edu; phone (775) 784-6942; fax (775) 784-1390.

Letters to the president may be sent to:

Michael D. Aitken
Environmental Science & Engineering, CB-7431
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599-7431
mike_aitken@unc.edu

Letters to the editor may be sent to:

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University of Nevada, Reno
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AEESP Business Office
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jfetzner@uiuc.edu

(continued from page 1)

ington, but given our budget constraints we will need more help from our Government Affairs and Strategic Planning committees.

I don't know how many of you identify yourselves, as I do, as an environmental engineer, but if you do you've probably noticed that there is no professional society that truly represents environmental engineers and scientists. In last year's membership survey, one of the questions asked was "Should AEESP actively contribute to efforts to form a professional society that represents environmental engineering and science?" The response indicated a slight majority in favor, but when the data were stratified by age group it was clear that the younger members (younger than 50) were strongly in favor of such an initiative. In the interest of continuing momentum on this issue and, I believe, moving towards something I think our younger members in particular would like to see happen, John Novak and I are planning a workshop on the desirability and feasibility of creating a professional society for environmental engineers and scientists. We hope to hold the workshop in time to discuss its outcomes at our conference in Toronto next August.

Speaking of Toronto, please plan to attend the Education and Research conference, jointly sponsored by the American Academy of Environmental Engineers, from August 11-13. Information is available through our web site (www.aeesp.org) or directly at the site created by the organizers at the University of Toronto, www.ecf.utoronto.ca/apsc/enveng/enviro/.

The topics I broached above will continue to be discussed at our Board meetings this year. I welcome any comments you have on these or any other topics of interest to the membership. To take advantage of our presence in Toronto, our Board meeting schedule will be accelerated this year: we will meet in March and then again in August. If you have any items you would like to bring before the Board for discussion at either of these meetings, please let me know.

I close by noting that we need to continue to involve the younger members of AEESP in our activities--any organization that does not engage its younger members and shepherd them towards leadership positions is doomed. I've been asked by several of our younger members how they can become involved. The easiest way is to identify a committee whose work appeals to you, then contact either the chair of the committee or the Board contact (the list of chairs and contacts is at the front of our Membership Directory). Or, perhaps you've got an idea for an activity we are not currently involved in--run it by anyone on the Board for subsequent discussion at a Board meeting (but be prepared to chair the committee). So, to the younger members and students in the audience: Please become involved in AEESP!

Mike Aitken

Universities for which Graduate Enrollments in Environmental Engineering are Not Accounted for in the 1999 EWC Database[a]

Auburn University[b]	Texas A&M – College Station[c]
California Institute of Technology[b]	Tufts University[b]
Carnegie Mellon University[c]	University of California – Berkeley[b]
Colorado State University[b]	University of California – Davis[c]
Cornell University[c]	University of California – Los Angeles[c]
Duke University[c]	University of California – Riverside[b]
Louisiana State University[b]	University of Colorado – Boulder[b]
Massachusetts Institute of Technology[b]	University of Delaware[b]
Montana State University[b]	University of Kansas[b]
North Carolina State University[b]	University of Massachusetts - Amherst[d]
Northwestern University[b]	University of Notre Dame[b]
Oregon State University[b]	University of Texas at Austin[b]
Purdue University[c]	University of Washington[c]
Rice University[b]	University of Wisconsin[c]
Stanford University[c]	Utah State University[b]
Syracuse University[b]	

[a] American Society of Civil Engineers, *1999 Civil & Environmental Engineering Enrollment Data, November 2000*. Original data source cited as *Engineering and Technology Enrollments, Fall 1999*, Engineering Workforce Commission of the American Association of Engineering Societies.
[b] All graduate enrollments indicated to be zero (inferred from blank cells in data table).
[c] University not listed in the data table.
[d] Zero PhD students indicated (inferred from blank cells in data table).

AEESP Board Highlights

- The AEESP Board of Directors held its semi-annual meeting on October 13 and 14 in Atlanta, the site of the annual WEFTEC conference. A pre-meeting orientation session was held for the new Board members: Marc Edwards, Chuck Haas, and Amy Zander. The full Board meeting was attended by Dom Grasso (President), Mike Aitken (Vice President), Jerry Speitel (Treasurer), Kim Hayes (Secretary), Robin Autenrieth (Past President), Lisa Alvarez-Cohen, John Novak, Catherine Peters, plus the three new board members.
- Next year's officers elected on the first day of the meeting were: President–Mike Aitken, Vice President–Catherine Peters, Treasurer–Susan Larson. Kim Hayes will continue in his role as Secretary for another year.
- AEESP membership grew in the past year. This annual growth is consistent with the steady increase in membership since 1991. Proportionately, a large part of this growth was in the numbers of assistant professors and graduate students. The Membership Committee, chaired by Craig Adams, is currently producing an updated brochure to continue to attract new members.
- The board voted to confer emeritus status to Clifford W. Randall, Richard Speece and David Hendricks. Congratulations to these members, who are recognized for their sustained and outstanding contributions to AEESP.
- Jerry Speitel's report of the AEESP budget and the Audit Report prepared by Dave Dzombak (former Treasurer) prompted much discussion of ways to maintain a safe monetary reserve while providing the same high level of service to our members. Two years ago, the board made a bold decision to enter into a period of deficit spending so that AEESP could be more active in government affairs. Kathi Ream of KAR Associates was retained. Her services have been instrumental in increasing AEESP's visibility in Washington and involving AEESP in government arenas affecting environmental policy, and impacting federal research funding decisions. The board agreed that these activities have benefited the members, but voted to down-scale our relationship with KAR while using our own member resources to sustain the momentum of the new government initiatives. Several other strategies to rein in costs and increase revenue were discussed. In January, the board will save travel costs by holding the Executive Committee meeting via teleconference. Because membership dues is a large portion of AEESP revenue, individual members and sustaining members are encouraged to pay their dues in a timely fashion.
- AEESP's reliance on internet services continues to increase. AEESP is indebted to the initiatives and efforts of Kurt Paterson in building and maintaining the AEESP web site as well as maintaining the computer server that houses the web site. The board acknowledges Kurt's request to step down as web site director but remain as system administrator. A replacement for Kurt is currently sought and will take over as web site director by August 2002.

Strategic Planning Committee seeks input

The AEESP Strategic Planning Committee, chaired by Dave Dzombak of Carnegie Mellon and Bruce Logan of Penn State, is evaluating anew the mission statement and goals of AEESP and developing recommendations for organizational priorities over the next five years. Members are invited to review the mission statement and goals of our organization, which are posted on the AEESP web site, and to provide any suggestions for revisions of these and/or for organizational priorities to Dave Dzombak (dzombak@cmu.edu) or Bruce Logan (blogan@psu.edu). Submission of thoughts and suggestions by March 1 would be helpful to the committee.

New fields of expertise among AEESP members

Last spring the AEESP Board of Directors updated the categories of "Fields of Expertise and Areas of Specialization," and this summer members were asked to assign themselves to the new categories. The 2001 Membership Directory includes the new categories and the new distribution of members. Four new fields of expertise were added. Sixteen percent of AEESP members assigned themselves to the new category, "Global-Scale and Regional-Scale Environmental Impacts"; 10% are in "Innovations in Environmental Education"; 6% are in "Nanotechnology"; and 5% are in "Sustainability." The two most populated categories are still "Biological Treatment Processes," with 38% of the members, and "Chemical and Physical Treatment Processes for Water and Wastewater," with 37%.

There were notable changes in some of the existing categories. Members who assigned themselves to the field of "Geological Sciences" increased from 2% in 2000 to 16% in 2001. This is largely due to the addition of the new subcategory "Biogeochemisty," which accounts for nearly half of the members in the "Geological Sciences" category. The field of "Hydromechanics" increased from 3% to 14%. Significant decreases were seen in "Groundwater Quality" (from 23% to 11%), "Hazardous Materials" (from 33% to 12%), "Mathematical Analysis and Modeling" (from 27% to 11%), and "Water Chemistry" (from 20% to 11%).

2001 AEESP Awards

The following awards were presented by AEESP President Domenico Grasso, except as noted:

AEESP/CH2M Hill Outstanding Doctoral Dissertation Award

(presented by Jay Witherspoon of CH2M-Hill)
Dissertation: "The Response of Airborne Bacteria to Ultraviolet Germicidal Radiation"
Jordan Peccia
Advisor: Mark Hernandez, University of Colorado

AEESP/Parsons Engineering Science Outstanding Doctoral Dissertation Award

(presented by John Koon of Parsons-Engineering Science)
Dissertation: "Phenanthrene Sorption/Desorption Mechanisms and Rapid Prediction of Long-Term Desorption Rates Using Superheated Water"
Martin D. Johnson
Advisor: Walter J. Weber Jr., University of Michigan

AEESP/Montgomery-Watson-Harza Master's Thesis Award

(presented by Rudy Tekippe of Montgomery-Watson-Harza)
First Place:
"Aqueous Silica in the Environment: Effects on Iron Hydroxide Surface Chemistry and Implications for Natural and Engineered Systems"
Christina Clarkson Davis
Advisor: Marc Edwards, Virginia Polytechnic Institute & State University
Second Place:
"Identification of an Excreted Biomolecule: Identification and Environmental Applicability"
Jenny Baeseman
Advisor: Paige J. Novak, University of Minnesota

Malcolm Pirnie/AEESP Frontier of Research Award

(presented by Doug Owen of Malcolm Pirnie)
Arup K. SenGupta,
Lehigh University

AEESP/McGraw Hill Award for Outstanding Teaching in Environmental Engineering and Science

(presented by Jean Turrise of McGraw Hill)
Susan M. Larson, University of Illinois at Urbana-Champaign

AEESP/Wiley Interscience Award for Outstanding Contributions to Environmental Engineering and Science Education

(presented by Joel Stein of Wiley-Interscience)
Susan J. Masten, Michigan State University

2001 Founders' Award

For sustained and outstanding contributions to environmental engineering education
John L. Cleasby, Iowa State University

2001 Outstanding Publication Award

A landmark environmental engineering paper that has withstood the test of time
Reaeration Prediction in Natural Streams**, J. Sanit. Engrg. Div., ASCE**, 95(1):65-93 (1969)
Edward L. Thackston, Vanderbilt University and **Peter A. Krenkel**, University of Nevada, Reno

AEESP Distinguished Service Awards

John T. Novak
For outstanding service as a Board Member of AEESP
Susan E. Powers
For outstanding service as a Board Member of AEESP
Paige J. Novak
For outstanding service, AEESP Dissertation Committee (1999-2001)
Fred S. Cannon
For outstanding service, AEESP Thesis Committee (1999-2001)
Domenico Grasso
For outstanding service as the AEESP President
(presented by incoming AEESP President Michael Aitken)

2002 Award Nominations

Nominations are sought for the following 2002 AEESP awards:

Montgomery-Watson Consulting Engineers M.S. Thesis Awards

Entries are sought for the 2002 Montgomery-Watson-Harza Master's Thesis Awards. First and second place awards will be made, each consisting of a plaque and a cash prize for both the student and the faculty advisor. The cash prizes for the first place award are $600 for the student and $300 for the faculty advisor, and the cash prizes for second place are $400 and $200, respectively. Faculty advisors wishing to nominate a student for this competition should send three copies of the thesis to:

Daniel Noguera
Chair-AEESP M.S. Thesis Committee
Civil and Environmental Engineering
University of Wisconsin, Madison
1415 Engineering Drive
Madison, WI 53706

The submission should be accompanied by a simple letter of transmittal stating 1) the address, e-mail and phone number for the student and advisor, 2) an indication as to when the thesis was completed, and 3) a concise statement defining the student's intellectual contribution to the work. The copies will not be returned, so inexpensively bound xerographic copies are recommended. The deadline for submission is March 15, 2002 for theses completed during the 2001 calendar year. Faculty advisors are urged to limit themselves to a single entry—self nominations by students will not be accepted.

A selection committee of three AEESP members will read and judge each thesis. Each thesis is evaluated based on 100 points allocated to the following major categories: Scientific and Technical Merit (46 pts), Originality of Research (15 pts), Contribution to the Advancement of Environmental Engineering (15 pts) and Clarity of Presentation (24 pts).

Selections will be made by September so that the recipients and their advisor can be invited to the AEESP meeting at the WEF annual meeting. Our thanks to Montgomery-Watson for their generosity in sponsoring these awards and to the members of the 2001 M.S. Thesis Review Panel: Fred Cannon (chair), Daniel Noguera, and Say-Kee Ong.

AEESP Outstanding Paper Award

Nominations are sought for the 2002 AEESP Outstanding Paper Award for a "landmark paper that has withstood the test of time." Nominators should send a copy of the paper and a letter (two pages maximum) to the chair of the awards committee: Brian A. Dempsey; Chair, AEESP Awards Committee; The Pennsylvania State University; 212 Sackett Building; University Park, PA 16802-1479. Brian's e-mail address is: bad5@psu.edu. The letter should give the citation, the reasons why the paper has been considered a "landmark," and a description of the influence the paper has had on the practice of environmental engineering. Nominations must be made by members of AEESP who are not an author or co-author of the paper before March 15, 2002.

Any author of a winning paper is ineligible in the competition for a period of three years, and at least one of the authors must be living. The winners since 1999 are:

1999: Chiou, C.T., L.J. Peters and V.H. Freed, "A Physical Concept of Soil-Water Equilibria for Non-Ionic Compounds." Science (206)16 831-832 (1979).

1999: Sposito, G., "The Operational Definition of the Zero Point of Charge in Soils." Soil Sci. Soc. Am. J., V. 45, 292 (1981).

2000: J. C. Crittenden, D. W. Hand, H. Arora and B. W. Lykins, Jr., "Design Considerations for GAC Treatment of Organic Chemicals." JAWWA, 79 (10) 74-82 (1987).

2001: E. L. Thackston and P. A. Krenkel, "Reaeration Prediction in Natural Streams." J. Sanit. Engrg. Div., ASCE, 95(1):65-93 (1969).

Please reflect on the papers that you think have had the greatest impact on environmental engineering and consider nominating one for this award. Note that papers in all areas of environmental engineering, including air pollution, water quality, solid waste, hazardous waste, etc. are eligible.

CH2M Hill and Parsons Doctoral Dissertation Awards

Entries are sought for the 2002 AEESP Outstanding Doctoral Dissertation Awards. Two awards will be given, each consisting of a plaque and a cash prize of $1000 for the student, and a plaque and a cash prize of $500 for the faculty advisor. Faculty advisors wishing to nominate a dissertation should send three copies to:

Lutgarde Raskin
Chair-AEESP Dissertation Committee
Civil & Environmental Engineering
University of Illinois at Urbana-Champaign
205 N. Matthews Ave., MC-250
Urbana, IL 61801-2352

They should be accompanied by a simple letter of transmittal stating 1) the current address, e-mail and phone number for the student and advisor, 2) an indication as to when the thesis was

completed, and 3) a concise statement defining the student's intellectual contribution to the work. The latter statement is especially important if multiple authors contributed to the work under consideration. The copies will not be returned, so inexpensive xerographic copies are recommended. The deadline for submission is March 15, 2002 for dissertations completed during the 2001 calendar year. Faculty advisors are urged to limit themselves to a single entry (which will be considered for each of two awards); self-nominations by students will not be accepted.

A selection committee of three AEESP members will read and judge each dissertation on the basis of 100 total points: scientific and technical merit of the research (30); originality of research (30); contribution to advancement of environmental engineering (30); and, clarity of presentation (10). The selections will be made by September. Our thanks to Parsons Engineering Science and CH2M-Hill for their generosity in sponsoring these awards and to members of the 1998 Doctoral Dissertation Review Panel: Paige Novak (Chair), Lut Raskin and Keri Hornbuckle.

AEESP Founder's Award

The AEESP Founders' Award is given annually to recognize an AEESP member who has made "sustained and outstanding contributions to environmental engineering education and the profession." Previous recipients of the Founder's Award are listed below.

1991 E. Robert Baumann, Iowa State University
1992 Perry L. McCarty, Stanford University
1993 Richard Engelbrecht, University of Illinois
1994 Daniel A. Okun, University of North Carolina-Chapel Hill
1995 Charles R. O'Melia, Johns Hopkins University
1996 Earnest F. Gloyna, University of Texas at Austin
1997 Linvil G. Rich, Clemson University
1998 Richard I. Dick, Cornell University
1999 Vernon L. Snoeyink, University of Illinois
2000 Walter J. Weber, Jr., University of Michigan
2001 John L. Cleasby, Iowa State University

To make a nomination for the 2002 AEESP Founders' Award, contact the chair of the awards committee: Brian A.Dempsey; Chair, AEESP Awards Committee; The Pennsylvania State University; 212 Sackett Building; University Park, PA 16802-1479. Brian's e-mail address is: bad5@psu.edu. The award will be presented at the annual October meeting.

Outstanding Educator Awards

The purpose of these awards is "to honor individuals who are making outstanding contributions to the teaching of environmental engineering, both at the individual's home institution and beyond." The selection process for the "Outstanding Teaching…" award favors faculty at the assistant and associate professor level who teach large undergraduate classes and especially those who are developing innovative instructional methods. The selection process for the "Outstanding Contribution…" award places less emphasis on academic rank and more emphasis on the development of innovative methods, including the dissemination of methods to peers. Only AEESP members are eligible to receive either award, and an individual may receive either award only once. Each award winner receives a plaque and a check for $1000, to be presented at the annual October Meeting at WEFTEC.

The nomination package should include the following items: a) a resume, tailored to highlight contributions to environmental engineering education ; and b) relevant information related to teaching not included in the resume. Some of the following additional materials will be helpful in judging the candidate's qualifications for these awards: a) input from undergraduate and graduate students; b) summary teaching evaluations by faculty and/or students, c) supporting letters from colleagues intimately familiar with the nominee's contributions to environmental engineering education, d) demonstrated innovation and success in teaching; e) demonstrated effort at dissemination of methods to the academic community. Letters from colleagues outside the nominee's home institution documenting application of software, innovative teaching ideas, textbooks, course notes, mentoring or other significant contributions will be given special consideration.

The deadline for nominations is March 15, 2002. Nominations can come from former students or from professional colleagues, and should be sent to: Brian A. Dempsey; Chair, AEESP Awards Committee; The Pennsylvania State University; 212 Sackett Building; University Park, PA 16802-1479.

Malcolm Pirnie/AEESP Frontier Award in Research

The purpose of the Frontier Award is "to honor an individual who has advanced the environmental engineering and science field through recognized research leadership and pioneering efforts in a new and innovative research area." All AEESP members are eligible for this award. The award consists of a plaque and a cash prize of $1000 to be presented at the WEFTEC Conference in October. Only AEESP members are eligible to nominate candidates. The deadline for nomination is March 15, 2002 for full consideration by the AEESP Awards Committee. Nominations should be submitted to: Brian A. Dempsey; Chair, AEESP Awards Committee; The Pennsylvania State University; 212 Sackett Building; University Park, PA 16802-1479. Those making nominations must submit a supporting statement plus selected literature citations detailing the nominee's contribution to the new and innovative research achievement for which the nominee is being honored.

2002 Distinguished Lecture Tour

TO: Potential Hosts—AEESP Distinguished Lecturer
FROM: Peter Fox, Chairman AEESP Distinguished Lecturer Committee
SUBJECT: Sponsorship of the Year 2002 AEESP Distinguished Lecturer

Dr. C. P. Leslie Grady Jr., Ph.D., P.E., D.E.E.
R. A. Bowen Professor of Environmental Engineering and Science
L. G. Rich Environmental Research Laboratory
Clemson Research Park
342 Computer Court
Anderson, SC 29625-6510
www.ces.clemson.edu/EES

Dr. Grady is the R. A. Bowen Professor of Environmental Engineering and Science at Clemson University. Dr. Grady's major teaching and research interests are environmental biotechnology, the modeling of wastewater treatment systems, and the application of process engineering techniques to the design of treatment systems for water, wastewater and aquifer restoration. His major research effort over the past several years has been directed toward a better understanding of the fate and effects of toxic and other synthetic organic chemicals (SOCs) in engineered and natural environments. Current research continues to focus on the fate and effect of SOCs in biological treatment systems. He is also interested in new applications of environmental biotechnology, such as for the removal of SOCs from contaminated air and soil. Finally, he continues to have an interest in biological nutrient removal and has participated in the development of a mathematical model and an interactive microcomputer program for simulation of single sludge systems for nitrogen removal.

Dr. Grady has prepared two lectures for his tour:

Lecture 1. Biodegradation kinetics. What do those numbers mean?

You have just gone to work for a consulting engineering firm specializing in the treatment of industrial wastewater and have been assigned to a team working on the design of a new activated sludge facility for a major client. A major component in the wastewater is a regulated organic compound. Your supervisor asks you to search the literature to find all you can about its biodegradation kinetics. As you gather the information, you quickly note that the parameters quantifying the kinetics exhibit quite a bit of variability. How will you decide which set or sets of values to use? How can you judge which are most applicable to your situation? This lecture will help prepare you to answer those questions by examining the factors that influence the parameters characterizing biodegradation. We'll examine why the way in which the biomass was grown influences the kinetics it exhibits. We'll look at the effect of other constituents in the wastewater on the measured parameter values. We'll also see how the measurement technique itself affects the values obtained. By systematically examining these and other issues, this lecture will make you aware of the things you should consider when evaluating kinetic parameter values and show you why you should think of those values in terms of ranges, rather than single values.

Lecture 2. What is this thing called sludge, this crazy thing called sludge?

The activated sludge process for wastewater treatment has been around for quite a while and anyone who has ever visited a wastewater treatment plant using it knows that activated sludge is that brown flocculent material swirling around in the bioreactor. It is made up of bacteria and higher life forms that all grow together in a homogeneous mass. Right? Actually, it's a whole lot more complicated than that. In fact, it is a whole other world that we are just now beginning to appreciate. As engineers, we like to control things, so we like to think that if we maintain the right conditions in the bioreactor we can determine the nature of the microbes present in the activated sludge. To a certain degree, that is true. However, if you've ever worked with activated sludge you are aware of its ability to undergo apparently random changes for no discernible reason. Why do those changes occur? This lecture will examine that question. We'll look at the nature of the microbial community present in activated sludge and the kinds of interactions that can occur within and between different populations in it. We'll consider the impacts of "nonlinear dynamics"and the question of whether activated sludge is a chaotic system. We'll review some of the new tools that microbiologists have developed that can now be applied to understanding activated sludge dynamics at a whole new level. Our goal will be to open up that "brown box" and gain a new appreciation of the fascinating world of the microbes. Finally, we'll speculate on how the new knowledge we are gaining will help us do a better job engineering systems so that the communities that develop will do what we want them to do.

Institutions interested in hosting Dr. Grady should send a letter request with appropriate documentation by January 25, 2002 to:

Peter Fox, Chair
AEESP Distinguished Lecturer Committee
P.O. Box 875306
Department of Civil and Environmental Engineering
Arizona State University
Tempe, AZ 85287-5306
Email: Peter.Fox@asu.edu
Telephone: (480) 965-1734
Fax: (480) 965-0557

This request should include the following information:

1. Name and address of host institution and contact person
2. Identify which of the two seminars is requested
2. Identity of possible co-sponsors
3. Arrangements for publicity, accommodations and possible video taping of lecture
4. A brief statement describing how a visit by Dr. Grady would benefit and complement current academic activities

Expenses associated with the lecture tour are shared by the host institution on a total lump sum, fixed cost basis. It is estimated that each institution would contribute approximately $1000 to cover travel and living expenses, as well as provide a modest honorarium. Responsibility for final choice of the lecture tour will rest with the AEESP Distinguished Lecturer Committee who will make that selection on the basis of information received. Special consideration will be given to institutions who have not been visited by the Distinguished Lecturer within the past year or two, the research and teaching focus at the candidate institutions, and the possibility of having more that one institution co-host the event.

The members of the AEESP Distinguished Lecturer Committee are pleased with the prospect for another successful tour and look forward to a timely receipt of invitations to participate as hosts.

New AEESP Lab Manual now available on CD

The *AEESP Environmental Engineering Processes Lab Manual* is now available on CD. The manual contains 36 labs covering five main areas:

- Transport and partitioning processes
- Chemical processes
- Biological processes
- Particle dynamics and separations
- Design applications

Five classic labs from the 1988 AEEP Lab Manual are also included. This lab manual is intended to have "something for everyone," covering a wide range of academic levels and equipment sophistication. The Table of Contents is posted on the AEESP web site under the publications link (www.aeesp.org).

The cost for members is $50 (student members, $25) and for non-members is $75. As for all AEESP publications, please add $5 postage and handling for delivery to U.S. addresses and $10 for delivery to non-U.S. addresses. MasterCard and Visa credit cards are accepted, and credit card orders (please include expiration date) may be sent by email to jfetzner@uiuc.edu or by Fax, 217-355-9232. Orders with checks may be sent to: AEESP Business Office, 2208 Harrington Court, Champaign, IL 61821. CDs will be sent by First Class Mail upon receipt of payment.

Graduate Register available

Paper copies of the *Graduate Register* will be available for $25. Requests should be sent to Joanne Fetzner, jfetzner@uiuc.edu. The Graduate Register is also available free-of-charge on the AEESP web site, www.aeesp.org.

New newsletter ad policy

Notice to advertisers: Any advertisement (including faculty, post-doc or student ads, or other types of announcements) coming from an AEESP member will be free for the first 250 words (approximately 1/4 page), and then charged at $1 per word for additional content (if formatted to fit in a column). Non-members would be charged at the per word rate for any size column-formatted ad. Full page formatted advertisements will be charged at $500 for members and $1000 for non-members. All formatted full page ads will be accompanied by a free web ad.

AEESP emeritus membership

Upon retirement, members may apply to the AEESP Board for Emeritus membership if they have been AEESP members for at least 20 years, or have been a member for fewer years but have contributed substantially to AEESP through service on committees or as an officer.

AEESP directory correction

Our apologies to the following AEESP member, who was inadvertently omitted from the 2001 directory. Members, please add to your directory:

Krishna Pagilla (1995)
Assistant Professor
Chemical & Environmental Engineering
Illinois Institute of Technology
Chicago, IL 60616-3793
TN: 312/567-5717
FN: 312/567-8874
EM: pagilla@iit.edu
EX: 04, 05, 10
SP: 0401, 0411, 0413, 0513, 1001

AEESP members, please share items of professional achievement with other AEESP members. Send a brief note via e-mail to: Amy E. Childress, AEESP Newsletter Editor, amyec@unr.edu.

University of California at Davis

The Department of Civil & Environmental Engineering at the University of California at Davis is pleased to welcome the appointment of **Dr. Stefan Wuertz** as Associate Professor. Dr. Wuertz earned a B.S. in Microbiology (Honors) at the National University of Ireland in 1986, a Ph.D. in Environmental Sciences at the University of Massachusetts, Boston in 1992, and the rank of Doctor habilitatus (Dr. habil) in Civil Engineering at The Technical University of Munich in 2000. He also completed three years of post doctoral work at VITO in Mol, Belgium. Before coming to Davis in the Fall 2001, he was a Research Associate at the Technical University (TU) of Munich, Germany and took up the challenge of building a microbiology section in the Civil Engineering department there. He was also the administrative director of the Research Center for Fundamentals of Aerobic Biological Wastewater Treatment in Munich. His area of specialization is Environmental Biotechnology. His orientation is toward developing and applying microbiological tools to answer important questions in engineered and natural systems.

AEESP members,

Have you moved or has your address changed? Please send address changes to:

Joanne Fetzner
AEESP Business Office
2208 Harrington Court
Champaign, IL 61821
jfetzner@uiuc.edu

University of Cincinnati

We are pleased to announce that **Dr. Mingming Lu** has joined the Department of Civil and Environmental Engineering, University of Cincinnati as an Assistant Professor since September 2001. Dr. Lu specializes in air quality and air pollution control. Her research interests include fine particulate matter (PM2.5) and PAH formation mechanisms from combustion processes, development of particulate control technologies, development of analytical methods for PAH identification and quantum chemistry modeling.

Dr. Lu received a B.S. and an M.E. in Environmental Engineering from Tsinghua University, Beijing, China and a Ph.D. in Environmental Engineering from Georgia Institute of Technology.

University of North Carolina, Charlotte

Hilary I. Inyang, Duke Energy Distinguished Professor and Director of the Global Institute for Energy and Environmental Systems at the University of North Carolina-Charlotte has been appointed by Ms. Christine Todd Whitman, Administrator of the U.S. Environmental Protection Agency, to serve on the Research Strategies Advisory Committee of the Agency's Science Advisory Board (SAB). Dr. Inyang also will continue as the Past Chair of the Environmental Engineering Committee (EEC).

The SAB, in its present form, was established in 1978 by the Environmental Research, Development, and Demonstration Authorization Act (ERDDAA). Members of and Consultants to the Board constitute a distinguished body of scientists, engineers, and economists who are recognized, non-governmental experts in their respective fields. These individuals are drawn from academia, industry, and environmental communities throughout the United States and, in some limited cases, other countries. Additional information about the SAB may be found at http://www.epa.gov/science1/. Additional information about Professor Inyang's professional activities and accomplishments may be found at http://www.ce.uncc.edu/.

The submissions deadline for the April 2002 AEESP News is March 1, 2002

Research EPA awards $22.5 million to five universities to study effects of hazardous substances

The Environmental Protection Agency has awarded more than $22 million in grants to universities to establish five hazardous substance research centers, the agency announced Nov. 19.

The centers will research potential effects of hazardous substances in the environment and will provide community outreach, according to an EPA statement. EPA Administrator Christine Todd Whitman said the new centers are part of the agency's program to fund research and training on the management of hazardous substances and to publish the research results. The research centers also will work on the remediation and redevelopment of brownfields, which are abandoned, idled, or underused industrial and commercial properties, according to the statement.

Regional centers at five universities

The centers will be located at five universities in different regions of the country that will each receive a certain portion of the funding. These five institutions will share the grant money with 17 other universities that will help with research and community outreach, EPA said.

The Directors of these new centers are as follows:
Ed Bouwer—Johns Hopkins University
Kathy Banks—Purdue University
Lew Semprini—Oregon State University
Danny Reible—Louisiana State University
Charles Shackelford—Colorado State University

Johns Hopkins University

Johns Hopkins University in Baltimore will receive $5.2 million to promote understanding of processes for detecting, assessing, and managing risks associated with the use and disposal of hazardous substances in urban environments, EPA said. The John Hopkins center will be supported by a consortium of universities that will provide technical expertise to community groups, to state and local environmental regulators, and to industry in the Northeast region.

Purdue University

Purdue University in West Lafayette, Ind., will receive $4.5 million in grants from EPA and will focus on low-cost remediation technologies to remove contaminants from the environment and to restore ecosystem quality, thereby enhancing site redevelopment options, the agency said. The focus of this center will be the remediation needs of the Midwest, Middle Atlantic, and Great Plains regions.

Oregon State University

Oregon State University in Corvallis, Ore., was awarded $4.5 million to research the remediation of below-ground contamination problems associated with volatile organic chemicals and other known ground water contaminants in the Western part of the country, according to the statement.

Louisiana State University

Louisiana State University in Baton Rouge, La., will receive $4.5 million to provide information about the engineering management of contaminated sediments and other problems of special interest to communities in the Southeast.

Colorado State University

Colorado State University in Fort Collins, Colo., was awarded $3.8 million to focus on developing new or improved methods to clean up environmental problems associated with mine wastes, especially in the Rocky Mountains, EPA said.

Outreach for low-income communities

Of the total funding, 30 percent will be used by the universities to develop outreach and technology support programs for citizens in low-income communities. With these programs, the agency hopes to help the citizens become effective participants in hazardous substance management decisions that might affect them, EPA said.

The EPA grants were awarded by the Office of Solid Waste and Emergency Response and the Office of Research and Development's Science to Achieve Results program, an ongoing grant program designed to engage the nation's best university scientists and engineers in environmental research by awarding $100 million annually.

Environmental and Water Resources Institute (EWRI) ASCE

The EWRI announces the Annual Student and Younger Member Competitions:

2002 Photography Contest

ASCE student chapter or club members and younger members are invited to submit photographs appropriate to the theme of the congress, 2002 Conference on Water Resources Planning and Management and Symposium on Managing the Extremes-Floods and Droughts at the Hotel Roanoke and Conference Center, Roanoke, Virginia on May 19-22, 2002. One photograph will be selected to appear on the cover of the proceedings and travel will be provided to the conference. Mail entries to arrive by January 31, 2002 to Dr. Jim Groves at VMI, email: grovesjr@mail.vmi.edu.

2002 Student Technical Paper Competition

Any member of an ASCE Student Chapter is eligible to submit a 6-8 page paper. Any subject matter related in technical aspect to environmental or water resources engineering will be accepted, including laboratory, field studies or summaries of thesis research. There are two categories: graduate or undergraduate. Cash awards and travel to the conference for paper presentation will be awarded to five students. Inquiries regarding this competition may be addressed to Dr. Kathleen Leonard (email: leonard@cee.uah.edu or ph: 256-824-6423). An electronic copy of the paper must be received by close of business on March 15, 2002. Awards will be presented at the International Environmental Engineering Conference in Niagara Falls, Canada on July 21-24, 2002.

Parsons Brinkerhoff Capstone Design Contest

Currently all undergraduate civil engineering programs are required to include a "capstone" design experience, and schools are strongly urged to require their students to work in teams. Four finalist teams will be selected to compete at the Water Resources Planning Conference. Each student team will orally present their project to a panel of industry judges during a special session at the conference. Each team will receive up to $1000 for travel reimbursement and a one-year membership in EWRI. Plaques will be awarded, and the members of the top team will win a one-year subscription to an ASCE journal of their choice. Entry Information: To enter, send a four-page project description to include the Faculty Advisor's recommendation to Professor Robert G. Traver (ph: 610-519-7899, email: Robert.Traver@VILL.EDU) by March 2, 2002.

Additional conference information can be found at www.asce.org/conferences.

Johns Hopkins University

POSTDOCTORAL FELLOWSHIP or Ph.D. OPPORTUNITIES IN ENVIRONMENTAL CHEMISTRY. Two positions are available for postdoctoral fellows to participate in NSF or EPA-funded projects. One project involves investigating mechanisms of pollutant transformation at mineral-water interfaces, and the second project involves investigating the occurrence and fate of pharmaceutical compounds in natural waters and drinking water. Additional information pertaining to these projects can be found at http://www.jhu.edu/~dogee/roberts/opportunities.htm. For full consideration, please send resume and names of three references to: Professor A. Lynn Roberts, Department of Geography and Environmental Engineering, Johns Hopkins University, 3400 North Charles Street, Baltimore, MD 21218. Research assistantships for highly qualified Ph.D. students are also available for these projects; application information can be found at http://www.jhu.edu/~dogee/ by following the links to "Applicants" and "Admissions." Women and minorities are strongly encouraged to apply. JHU is an EEO/AA employer.

University of Oklahoma

Research Assistant positions are available in the School of Civil Engineering and Environmental Science (CEES) at the University of Oklahoma for qualified M.S. and Ph.D. students. Students will work on a NASA-funded project to study the treatment of drinking water by TiO_2-photocatalytic oxidation using novel aerogel photocatalysts. The overall objective of the research is to develop treatment processes for complete water recycling for long-term manned space missions or the space station. Qualified students will (1) investigate the influence of wastewater parameters such as alkalinity on treatment efficiency, (2) use mass spectrometry and other techniques to characterize refractory organic matter resistant to destruction by TiO_2 photocatalytic oxidation, and (3) determine the feasibility of non-biological photocatalytic ammonia oxidation for complete water recycling. Applicants should have a strong background and/or interest in fundamental or applied chemistry. Graduate research assistantships include competitive stipends, health benefits, and full tuition waivers. CEES has an active and exciting environmental science and engineering research program. Visit our website (http://www.cees.ou.edu) to learn more about our department. For further information on the research assistant positions described here, please contact Dr. Liz Butler (ecbutler@ou.edu, 405-325-3606) or Dr. Mark Nanny (nanny@ou.edu, 405-325-4234).

Employment Opportunities

University of California, Irvine

THE HENRY SAMUELI SCHOOL OF ENGINEERING. The Department of Civil and Environmental Engineering (CEE) at the University of California, Irvine invites applications for a possible senior full professor position in Hydrology. This tenured faculty position is in the area of applied hydrology, with an emphasis on semi-arid regions such as Southern California and the Southwest United States. The successful applicant will have a Ph.D. in Civil Engineering or related area, will maintain a substantial externally funded research program, will commit to teaching at both the graduate and undergraduate levels, and will be an internationally recognized scholar in two or more of the areas: (1) Remote sensing, (2) Hydrologic and water quality modeling, (3) Watershed management, (4) Systems analysis and operations research.

The Department currently has 17 faculty, 70 graduate students, and 200 undergraduate students, and significant growth is expected over the next decade. The Department's focus is on Infrastructure Systems, and this is also a focus area of the new $100 million California Institute for Telecommunications and Information Technology, which addresses remote and in-situ infrastructure observation systems. The Department is also part of the Urban Water Research Center at UCI.

Applicants should send, either by mail or electronically, a statement of research interests, resume, and names and contact information for three or more references to: Masanobu Shinozuka, Chair, Civil and Environmental Engineering, University of California, Irvine, Irvine, CA 92697-2175, ceedept@uci.edu.

You can visit the CEE Departmental website at: http://www.cee.uci.edu. Applications will be reviewed starting January 2002 and continue until the position is filled. The University of California, Irvine is an equal opportunity employer committed to excellence through diversity.

Cranfield University

CHAIR IN WASTE PROCESS TECHNOLOGY. Cranfield University in the U.K. wishes to strengthen its research and teaching in the general area of waste management technology. The new appointment should be active in research in any area relevant to the waste management industries–auditing, disposal, impact, management, minimisation and treatment. This could include excellence in areas of waste processing auditing, waste minimisation topics such as lowering carbon emissions, process engineering for industrial waste control, final wastes disposal routes, alternatives to landfill design, bioprocessing of wastes, and life-cycle analysis related to waste disposal options. The successful appointee should have the ability to build a significant research and development activity and lead a group that will include postgraduate level teaching. Cranfield is approximately 50 miles north of London and is the U.K.'s largest post-graduate only campus. The university specialises in applied science, technology and management working closely with industry.

Candidates wishing to make informal enquiries should contact: Professor Tom Stephenson, +44 (0)1234 754054, email: t.stephenson@cranfield.ac.uk.

For further information and an application form please contact: Miss P. A. Delger, Director of Personnel, Vice-Chancellor's Office, Cranfield University, Cranfield, MK43 OAL, UK, Telephone: 01234 754195/754050, email: vcpers@ cranfield.ac.uk.

Colorado State University

TENURE TRACK FACULTY POSITION, DEPARTMENT OF CIVIL ENGINEERING. The Civil Engineering Department of Colorado State University invites applications for a tenure track faculty position at the assistant or associate professor level in the area of environmental engineering. Candidates should have a background and research interest in physical, chemical and/or biological processes of environmental engineering. The degree requirement is a Ph.D. in Civil Engineering, Environmental Engineering or a closely related engineering field by August 1, 2002.

A B.S. in engineering is desirable. The candidate must have a demonstrated commitment to obtaining and conducting sponsored research. The following research areas are desirable: microbial processes in natural and engineered systems, applications of molecular biology, and wastewater and industrial waste treatment. The candidate is expected to teach and be responsible for the unit processes and operations courses in environmental engineering, graduate courses in aqueous chemistry, and residuals management. Candidates must be dedicated to excellence in teaching and professional service. The position is intended to strengthen multidisciplinary research activities and collaborate with other environmental faculty within the University. The appointment will be made at a level commensurate with the candidate's experience and qualifications.

Applications will be accepted until the position is filled. Applications, including a resume with a list of publications and research projects, transcripts, a description of teaching and research interests, and a minimum of three references, should be sent to: Environmental Engineering Search Committee Chair, Department of Civil Engineering, Colorado State University, Fort Collins, CO 80523-1372. CSU is an EEO/AA employer. Women and minorities are encouraged to apply.

Johns Hopkins University

POSTDOCTORAL FELLOWSHIP or Ph.D. OPPORTUNITIES IN ENVIRONMENTAL CHEMISTRY. Two positions are available for postdoctoral fellows to participate in NSF or EPA-funded projects. One project involves investigating mechanisms of pollutant transformation at mineral-water interfaces, and the

second project involves investigating the occurrence and fate of pharmaceutical compounds in natural waters and drinking water. Additional information pertaining to these projects can be found at http://www.jhu.edu/~dogee/roberts/opportunities.htm. For full consideration, please send resume and names of three references to: Professor A. Lynn Roberts, Department of Geography and Environmental Engineering, Johns Hopkins University, 3400 North Charles Street, Baltimore, MD 21218. Research assistantships for highly qualified Ph.D. students are also available for these projects; application information can be found at http://www.jhu.edu/~dogee/ by following the links to "Applicants" and "Admissions." Women and minorities are strongly encouraged to apply. JHU is an EEO/AA employer.

Penn State University

DEPARTMENT HEAD, CIVIL & ENVIRONMENTAL ENGINEERING. Nominations and applications are invited for the position of Head of the Department of Civil & Environmental Engineering at Penn State University. The successful candidate must possess academic credentials of the highest quality, as well as excellent administrative and interpersonal skills. An earned doctorate in Civil or Environmental Engineering or a related field is required.

There are 33 faculty in the Department, currently two endowed chairs and one professorship. The interdisciplinary nature of the faculty is reflected in the five major programs: construction, environmental engineering, hydrosystems, structures, and transportation. A majority of the research conducted by faculty in the Department is related to the rehabilitation of infrastructure and environmental protection. Our 2000/2001 research expenditures were over $8.5 million. In response to our increasing research budget, our laboratory space was increased by over 50,000 ft^2 during the last two years. The Department offers programs leading to B.S., M.Eng., M.S., and Ph.D. degrees in Civil Engineering and an undergraduate Minor, M.Eng. M.S. and Ph.D. degrees in Environmental Engineering. There are approximately 450 upper-level undergraduate students, 100 Master's students, and 60 Ph.D. students in the Department. Further information can be found at http://www.engr.psu.edu/ce/.

Penn State is a major research university and in recent years has ranked first in the nation among public universities in industry-sponsored research. *U.S. News and World Report* consistently ranks PSU's College of Engineering undergraduate and graduate programs in the top 15 of the nation. The university is located in State College, a town of about 40,000 inhabitants in central Pennsylvania. While situated in a beautiful college town with a variety of outdoor recreational and cultural activities, many major east coast cities (New York, Philadelphia, Pittsburgh, Washington D.C. and Baltimore) are only a few hours drive away.

Nominations and applications (including curriculum vitae, references, and philosophy of leadership) will be sought until January 31, 2002. However, applications will be considered until the position is filled. It is intended that the position will be filled by July 1, 2002. Applications will be reviewed with the strictest of confidence. Inquiries should be directed to: Dr. Brian A. Dempsey, Chair, Civil & Environmental Engineering Head Search Committee, College of Engineering, 101 Hammond, University Park, PA 16802. Inquiries can be made via e-mail to search-chair@cee.psu.edu or by phone at: (814) 865-1226. Penn State is committed to Affirmative Action, equal opportunity and the diversity of its workforce.

Rutgers University

ENVIRONMENTAL SCIENCES AND ENGINEERING FACULTY POSITION. Rutgers University's Department of Environmental Sciences, Cook College, invites applications for a junior level, tenure-track faculty position in the area of biological unit processes as applied to environmental science and engineering. Applicants should demonstrate a potential for high-quality teaching as well as for developing a sponsored research program. Appropriate research areas for this position would include the biological treatment of water and wastewater, bioremediation techniques and processes, biofiltration, biological processes underlying natural attenuation, and biofilms. The successful candidate will be expected to teach a lecture course and a laboratory course in biological unit processes. Other courses will depend on the candidate's interest and expertise. Qualified applicants are strongly encouraged to send by December 10, 2001, a complete resume, a statement outlining teaching and research interests, and the addresses of three individuals willing to provide references to: Professor Christopher G. Uchrin, Chair of Search Committee, Department of Environmental Sciences, 14 College Farm Road, Rutgers University, New Brunswick, NJ 08901-8551. This position is part of an ongoing larger initiative to build a high quality environmental engineering program at the greater Rutgers University campus involving both Cook College and the School of Engineering. For further information regarding other related positions, please refer to our website at http://www.envsci.rutgers.edu/. Rutgers University is an Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

WATER QUALITY FACULTY POSITION. The Department of Extension Specialists, Cook College, Rutgers University invites applications for an Assistant Extension Specialist (equivalent to Assistant Professor) in the area of water quality and water demand. The candidate is expected to conduct a research and extension program in water resources focusing on water management issues such as watershed management, non-point source pollution, groundwater protection and water supply. An ability to effectively foster and engage in interactive, col-

laborative research, and education is essential. Other responsibilities include: (1) serving as a liaison and coordinator among Rutgers Cooperative Extension County Agents and other national, state and local agencies and organizations involved in water management issues; and (2) assuming leadership for developing educational materials that interpret research findings, reviewing curricula, and preparing and disseminating information related to water management. The successful candidate is expected to generate grant support and to participate in professional scientific meetings and other scholarly activities, including publishing in appropriate peer-reviewed journals and other outlets. Teaching responsibilities include participation in the undergraduate/graduate curricula in Environmental Engineering, Environmental Sciences and/or Ecology, Evolution and Natural Resources. Ph.D. in the area of water management with broad training in water resources required that may include the chemical, biological, physical, and social aspects of water management; experience in water and watershed management highly desired; excellent leadership and communication skills required. Qualified applicants are strongly encouraged to send curriculum vitae, concise statement of research and extension objectives, and the names and addresses of five professional references to: Dr. Thomas J. Orton, Department of Extension Specialists, 88 Lipman Drive, Rutgers University, New Brunswick, NJ 08901-8525. Review of applicants will begin December 10, 2001, and will continue until the position is filled. Individuals covered by Section 503 of the Vocational Rehabilitation Act of 1973 or Section 402 of the Veteran's Readjustment Assistance Act of 1974 may self identify. If you wish to self identify, please do so in the cover letter transmitting your curriculum vitae. Rutgers University is an equal opportunity employer. Women and minorities are strongly encouraged to apply.

ENVIRONMENTAL SCIENCES AND ENGINEERING. As part of an expansion of its established environmental engineering program in the School of Engineering (SOE) and Cook College (CC), Rutgers-The State University of New Jersey is seeking to fill several faculty positions in Environmental Sciences and Engineering, jointly sponsored through SOE and CC. Qualified applicants with strong interest in research and teaching are encouraged to apply. Applications should include a statement of research and teaching interests, a curriculum vitae, and names, addresses (including electronic), and telephone numbers of four references to: Prof. Alkis Constantinides, Chair of the Search Committee, Department of Chemical and Biochemical Engineering, School of Engineering, Rutgers University, 98 Brett Road, Piscataway, NJ 08854-8058. For more information on Rutgers University, CC and SOE, consult our web page at http://www.rutgers.edu. Rutgers University is an Equal Opportunity/Affirmative Action Employer.

San Diego State University

DEAN OF THE COLLEGE OF ENGINEERING. San Diego State University is seeking an innovative and energetic academic leader to serve as Dean of the College of Engineering. The College offers B.S. and M.S. degrees in aerospace, civil, computer, electrical, environmental, and mechanical engineering, and a joint doctoral degree in engineering sciences/applied mechanics with the University of California, San Diego. SDSU is the largest campus in the California State University system with over 34,000 students, 2,000 faculty, and $124 million in extramural support for educational and research programs.

Qualifications: Excellent leadership and interpersonal skills, capable of promoting collegiality and building consensus. Experience and achievement in the development and management of engineering research activities. Willingness and ability to build corporate partnerships in San Diego's vibrant technology-based business community and to undertake fund raising and other development activities. An ability to work effectively in a multicultural campus and community setting.

Applications/Nominations: Nominations are welcome. Candidates may apply directly by sending a letter of application, curriculum vitae, and the names, addresses and phone/fax numbers of at least five references. Applications will be kept confidential, and references will only be contacted with permission of the candidates. Review of applications will begin January 10, 2002 and will continue until the position is filled. Preferred starting date is July 1, 2002. Please send all communications to: Office of the Provost, Dean of Engineering Search Committee, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-8010. SDSU is an Equal Opportunity employer. Additional information about the University and the College is available at http://www.sdsu.edu and http://www.engineering.sdsu.edu/. Inquiries may be submitted to Dr. Mirat D. Gurol at mgurol@mail.sdsu.edu.

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING. The Department of Civil and Environmental Engineering at San Diego State University (SDSU) invites applications for a faculty position in Geotechnical Engineering, effective Fall 2002. The position is a tenure-track appointment at the Assistant Professor level with teaching, research, and service responsibilities. The successful candidate will have a B.S. in civil engineering and a Ph.D. in civil engineering with emphasis in geotechnical engineering. The Ph.D. degree must be completed no later than the time of appointment. He/she will be capable of and interested in teaching undergraduate and graduate courses in geotechnical engineering, as well as service courses in the Civil and Environmental Engineering Department. The candidate will have competence in at least two of the following: (1) foundation engineering, (2) laboratory or field testing, including non-destructive and remote geotechnical sensing, (3) unsaturated soil mechanics, (4) geoenvironmental engineering,

(5) geotechnical earthquake engineering, (6) earth embankments and earth dams. He/she will have been active in laboratory or field experimental research and skilled in computers, including web-based practice. The candidate will be expected to show his/her potential to develop and sustain an active extramurally funded research program. He/she will be a registered professional engineer or have the potential to become registered. Interested individuals who meet the qualifications for this position are invited to send a letter of application which clearly highlights their qualifications and experience. The application materials must include a curriculum vitae, a statement of research interests, a list of publications, and the names and addresses of three professional references. The salary is competitive and commensurate with qualifications. SDSU can be virtually visited at http://sdsu.edu. Requests for additional information and/or letter of application should be directed to: Dr. Victor M. Ponce, Chair, Geotechnical Faculty Position Search Committee, Department of Civil and Environmental Engineering, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-1324; tel.: 619-594-6070; e-mail: ponce@ponce.sdsu.edu. Applications must be postmarked by February 28, 2002. SDSU is an equal opportunity employer.

Southern Illinois University, Edwardsville

ENVIRONMENTAL ENGINEERING FACULTY OPENING. The Department of Civil Engineering at Southern Illinois University Edwardsville (SIUE) is seeking to fill a tenure-track position beginning August 1, 2002 in environmental engineering. Preference will be given to applicants specializing in water/wastewater treatment and hydrology. Applicants should have 1) a Ph.D. in civil engineering or a closely related field; 2) at least one degree in civil or environmental engineering; and 3) a P.E. license or have sufficient experience to take the P.E. exam within three years. Duties will include teaching undergraduate and graduate courses in civil engineering with an emphasis in environmental engineering, engaging in research, and performing other duties associated with academic appointments.

The Department has an ABET/EAC-accredited undergraduate program as well as a strong, professionally-oriented Master's degree program. SIUE is a public, comprehensive, regional university with an enrollment of approximately 12,000. It is located 25 minutes northeast of downtown St. Louis, Missouri.

Initial screening of applications will begin February 20, 2002. Applications will be accepted until the position is filled. Applications, including a current vita and the names of three people who may be asked for letters of reference, should be addressed to: Chair of the CE Search Committee, School of Engineering, Box 1800, Southern Illinois University Edwardsville, Edwardsville, IL 62026-1800. For more information, see www.ce.siue.edu/faculty. Salary is competitive and commensurate with qualifications, experience, and responsibilities. SIUE is an affirmative action, equal opportunity employer.

Virginia Tech

POSTDOCTORAL POSITION. A postdoctoral position is available to study stress protein induction patterns in environmental bacterial strains responding to perturbations of xenobiotic chemicals, and to integrate that information into the development of biosensors for detecting environmental stressors. In addition to using conventional immunochemical approaches, biomimetic molecularly imprinted polymers (MIPs) will also be studied as potential elements for the sensors. Candidates will hold a Ph.D. in molecular biology, biochemistry, engineering with a strong biomolecular emphasis, or a related field. Send letter of application, CV and list of at least three references to Nancy Love, Associate Professor, Virginia Tech, Department of Civil and Environmental Engineering, 418 Durham Hall, Blacksburg, VA 24061-0246; voice: 540-231-3980; fax: 540-231-7916; e-mail: nlove@vt.edu. Virginia Tech is an EO/AA employer.

New announcement, ad policy...

Any advertisement, including faculty, post-doc or student ads, or other types of announcements submitted by an AEESP member, will be free for the first 250 words (approximately 1/4 page) and then charged at $1 per word for additional content, if formatted to fit in a column.

Non-members will be charged at the per word rate for any size column-formatted ad. Full page formatted advertisements will be charged at $500 for members and $1,000 for non-members. All formatted full page ads will be accompanied by a free web ad.

Book Reviews

Greenhouse Gas Control Technologies

D. J. Williams, R. R. Durie, P. McMullan, C. A. J. Paulson, and A. Y. Smith (Editors), CSIRO Publishing, Collingwood, Victoria, Australia, 2001

Years ago when I was on sabbatical at University College London, I was listening to the BBC and heard a commentator tell of a purported real life experience of an Englishman in Ireland, asking for directions to a church. A helpful Irishman said:

"You travel down this road about 3 miles until you get to a crossroads. Going right, you will pass a cemetery, and on your left a few miles further is a whiskey distillery. If you take a right at the distillery, you get to my favorite pub, the 'Purple Cow.' Behind the pub is a little road to the left that leads up a hill and not too far on that road you would see a house with red shutters."

"Thank you," said the Englishman, "But where is the church?"

"Oh, the church is about a quarter mile before the first right turn at the crossroads."

This is the story of greenhouse gases. We have already set the process in such motion that no matter what we do now, global warming will happen. But just because it is a done deal, it does not absolve us from trying to fix the problem for the long run. And this is the philosophy of the papers included in this excellent book. It is a compendium of 210 papers presented at the International Conference on Greenhouse Gas Control Technologies (GHGT-5). This is the fifth such conference with the first being in Amsterdam in 1992 and the most famous (or some say notorious) one being in Kyoto in 1994. The papers in this book vary widely and include all issues that contribute to the greenhouse gas problem. But, as the authors say in the foreword: "The emphasis...is on practical solutions and real demonstrations of mitigation technologies being planned and implemented today."

Following the plenary session papers, the topics include the capture of CO_2, geological storage of CO_2, ocean storage of CO_2, storage of CO_2 with enhanced hydrocarbon recovery, utilization of CO_2, other greenhouse gases, alternative energy carriers, energy efficiency, life cycle assessments and energy modeling, economics, international and national policy, trading and accounting policy, social and community issues, and reducing emission from industry and power generation.

This is a "must have" for everyone working on greenhouse gases and global warming. An impressive effort from down under.

David Williams, Bob Durie and Colin Paulson are with the CSIRO; Patrick McMullan is with the Electricity Supply Association in Australia; and Andrea Smith is with the IEA Greenhouse Gas Program in the UK. The book is most conveniently available in North America through Antipodes Books, 9707 Fairway Avenue, Silver Spring, MD 20901-3001; antipode@antipodesbooks.com.

P. Aarne Vesilind
Bucknell University

Good Start

G. W. Gibson, Anker Publishing, Boston, Mass., 1992

For several years at my previous place of employment, I had been teaching a course for senior graduate students interested in careers in academia. While preparing for this course, I found this book by Gerald Gibson, in which he gives good advice to young faculty just starting their university careers. In the book is a table setting out the career stages of faculty.

As I studied this table I thought, "Ohmygosh! This is ME!" Almost everything fit. And then I got to the very last block on the table—the hazards in late career—cynicism and isolation.

But why? Senior professors are at the peak of their professional careers, having served faithfully their students and the university, and should now be looking back at their careers with smug satisfaction. And yet cynicism is the common thread that colors many conversations among the elder statesmen of any university.

One of the reasons for this might be the apparent indifference some administrators feel toward what many faculty consider the essence of the university, the search for truth and the education of our students. Too often administrators seem to

place their own careers ahead of student welfare in the elusive search for reputation. They cause the best teachers to be fired and themselves do little if any instruction. Some of these administrators would not know an undergraduate student if they tripped over one. Asking the faculty to work hard while they are padding their own administrative reputations just does not sit well.

Another reason for latent cynicism might be more subtle. Many professors have worked long and hard at their jobs, spent uncounted hours with students in and out of the classroom, grubbed for external funds when their hearts may not have been in it, and served on innumerable university committees with little reward or glory. They did all this because they cared about the students and the university. And, they will, in a quiet moment, admit that they truly have the best job in the world.

But faculty also have a keen sense of justice and fairness. What about those faculty who are recruited from the outside and given almost no duties, paid exorbitant salaries, allowed to be away from the campus for years, and contribute nothing to the university except their fame? Or what about the faculty who are paid huge sums of money for doing nothing but bringing in research dollars which are then subsidized by undergraduate tuition? These eminences are often treated with condescension and granted special favors just so they would stay and not leave for greener pastures.

I know the argument. This is how reputations are built. Go out and hire the academic equivalents of Michael Jordan and Tiger Woods, and the halo effect will benefit all. But in truth, the halo effect will benefit only the administrators who take great pride in enhanced reputation. The professors who have given their careers to the university are not impressed by the expenditure of university funds to hire *wunderkind*. All they see is injustice. And injustice breeds cynicism. And cynicism can cause some to seek isolation, early retirement or a career change.

The fine little book by Gibson (excuse the diversion) is a wonderful addition to the library of anyone who has Ph.D. students interested in academic careers. Buy several and let them steal your copies. It would be money well spent.

P. Aarne Vesilind
Bucknell University

So You Want to Be a Professor? A Handbook for Graduate Students

P. Aarne Vesilind, Sage Publications, 1999

Although Vesilind's move to the hoop has slowed in recent years, his ability to produce an informative book has not. Vesilind's book, *So You Want to Be a Professor,* provides prospective professors with an excellent guide to getting started in academia. The book covers a range of topics from job opportunities in academia, putting together your resume, obtaining an academic position, how students learn, learning to teach, scholarship, publishing, and getting tenure. Along the way, the book provides plenty of good advice such as don't drink too much during an interview, how to get fired from an academic position, along with everyday wisdom from his grandfather.

The book has several important strong points. First, Vesilind devotes five chapters to teaching. One thing we, as a profession, generally don't do well is teach our students to teach. Oftentimes, the first experience in teaching begins with a copy of the syllabus that was used before (if you're lucky) and the location of the classroom. Vesilind brings together a range of topics on teaching that will help new instructors get started. This includes chapters on learning styles of students, how to organize a course, presenting a course, meeting your first class, testing and evaluation. The book gives the nuts and bolts of these topics that are important to beginning educators. Vesilind then devotes the remainder of the book to advising, scholarship, publishing, getting tenure, academic integrity, and how to get fired. This is the other strong point of the book, its breadth of coverage. Few other books cover the topics starting from types of universities and their expectations, why you would want to choose an academic career, how to do it, and managing your career. Vesilind is also able to provide his unique brand of storytelling and digressions

along with an understanding of ethical dilemmas that develop in academia, which make the book an easy read.

For readers interested in more depth on any of the topics, Vesilind provides a comprehensive supplementary reading list in his book, and I would consider it the first book to give a graduate student considering academia. It's a great starting point and companion book to some other excellent books on similar topics, such as "Teaching Engineering" by Wankat and Oreovicz and "Tomorrow's Professor" by Rick Reis. I certainly could have used Vesilind's book before entering academia and for the last 5 years, and I plan to give a copy of the book to any of my students that express an interest in academia.

Matthew J. Higgins, Assistant Professor
Bucknell University

Making the Most of College: Students Speak Their Mind

Richard J. Light, Harvard University Press, 2001

There are many ways to break up a long lecture so students can refocus on the topic. I found that 20 minutes is about the limit of their (and my) attention span, and that something interesting has to happen to get them back. Jokes are good, but risky. Stories, especially on yourself, are good but take time. One technique is to confound them with some simple idea, as if it came into your head just then. For example, which number is the smallest—0, 0.0, or 0.00? Or which takes up more volume, a room full of basketballs or a room full of ping pong balls? Or, how much and what kind of proof is needed when we say that something *causes* something else? Or, what is the difference between efficiency and effectiveness? I let them try to "help me out," and they wake up. Then I go back to talking about the Sludge Volume Index, or some such exciting topic.

The last problem—efficiency vs. effectiveness—is one of my favorites, and it can of course be illustrated in many ways, such as an internal combustion engine, a bridge, a software package, and education. What do we mean by the effectiveness of education, and what is efficiency?

Those of us embroiled in ABET are fully aware of the problems on assessing outcomes. What ABET now wants us to do is to measure the value added, or how effective are we. It no longer matters how good the faculty is, or how wonderful our syllabi are, but what in fact do the kids learn?

And if you want to know what worked and did not work, why not ask them? A revolutionary idea, I admit, but a good one. And this is what Richard Light did at Harvard. He asked the kids. And what he found is truly excellent reading. The book is full of wonderful examples and recommendations. For example, one thing that seemed to be tremendously useful is to ask each freshman to make it a point to get to know one faculty member during their first year. The students were encouraged to seek out the faculty, and to make their acquaintance. [Ever get a request from a senior applying for graduate school, a student you hardly know, telling you that he or she does not have a single faculty member who might know him or her well enough to write a recommendation? Sad.]

Or how about the recommendation that homeworks should not be used for assigning grades, but for learning, and the most effective learning occurs when students work together? Many of us in engineering and sciences figured this out long ago, but some of our humanities colleagues still have not understood the importance of collaborative learning. Light lets students tell you how important such collaboration is, and their stories are compelling.

This is a wonderful little book, and I recommend it highly. Our dean bought one for each member of our faculty, and I believe it has already made a difference in how we think about college education.

Richard J. Light is a professor in the Graduate School of Education at Harvard.

P. Aarne Vesilind
Bucknell University

Web site features interactive simulation models

Professors **Al Valocchi** and **Charlie Werth** at the University of Illinois have developed a set of Java applets for interactive simulation of solute transport and groundwater flow. The applets run on any web browser that is Java 1.1 compatible, and they can be accessed at: www.cee.uiuc.edu/transport/models.html.

The following models have been developed to date: (a) spherical diffusion; (b) one-dimensional solute transport with first-order decay and linear equilibrium sorption; (c) one-dimensional solute transport with first-order decay and rate-limited sorption; (d) one-dimensional transport of multiple species with sequential chain decay reactions; (e) two- and three-dimensional solute transport with first-order decay and linear equilibrium sorption; (f) two-dimensional steady flow in a homogeneous aquifer with wells and particle tracking. Each model has a simple and flexible web interface with graphical model output and links to tutorials that describe the background theory. Professors Valocchi and Werth have found these models extremely useful in their courses on groundwater, solute transport, modeling, and hazardous waste.

Please visit the site, use the models and tell them what you think.

New AWWA book

As a companion to the video tape "Tap Water--Terror or Treasure?" offered by AEESP, the American Water Works Association recently published the fourth edition of the book "Plain Talk About Drinking Water," by James M. Symons. This book, written in factual, but non-technical question and answer format, has been popular. Nearly 110,000 copies have been sold since it was first published in 1992. The current edition has been updated and expanded, now covering 231 questions with answers. It is available by calling 1-800-926-7337 and asking for catalog number 20244 or on the internet at http://www.awwa.org/bookstore/timssnet/products/tnt_products.cfm?WEB_TEXT_ID=144&action=long&format=table.

More information can be found at http://www.egr.uh/CIVE/symons/Plain_Talk.html?63,64. The video tape may be ordered by contacting Joanne Fetzner at jfetzner@uiuc.edu.

Call for Papers and Workshops

AEESP/AAEE 2002 Education and Research Conference

Toronto, Ontario, Canada
August 11-13, 2002

The AEESP/AAEE Conference on Education and Research in Environmental Engineering and Science will be held at the University of Toronto, Toronto, Canada on August 11–13, 2002. The overall theme of the conference is "Integrated Environmental Teaching, Research and Practice: Linking Engineering and Science to Address Complex Problems." We are pleased to invite abstracts for papers and posters for sessions in the following subthemes:

1. Understanding Complex Environmental Systems
2. Use of Information Technologies for Monitoring and Data Management
3. Integrating Novel and Advanced Technologies into Understanding and Solving Environmental Problems
4. Sustainable Systems
5. Innovative Educational Approaches

Teaching, research, and practice will be addressed in each of these subthemes. Papers and posters that link teaching, research, and applications are particularly encouraged. Examples of successful integration of research with practical solutions to environmental challenges are also solicited.

The conference will also include workshops related to environmental engineering and science teaching, research, and practice on Saturday and/or Sunday, August 10-11. Proposals for half- and full-day workshops are also invited.

Submission of Abstracts for Papers and Posters and Proposals for Workshops are to be submitted as follows:

1. Deadline: **February 1, 2002**
2. Include the following information:

a. Name, title and organization, telephone number, and full mailing and email addresses of submitter.

b. Name(s) and affiliation(s) of all additional authors and workshop presenters.

c. Whether submission is for: oral presentation of a paper; poster; or workshop. If preference is for a paper, please indicate if you would consider presenting it as a poster instead. For papers and posters, identify the most relevant subtheme.

d. Preliminary title of paper, poster or workshop.

e. 250-300 word abstract, including an explanation of how it relates to the subtheme.

3. Submit via email to aeesp02@ecf.utoronto.ca. If email is not available to you, fax to (416) 946-7632, or mail to the address below:

Prof. Philip Byer, Chair
AEESP/AAEE Conference
Division of Enviromental Engineering
University of Toronto
35 St. George Street
Toronto, Ontario, Canada M5S 1A4

4. Receipt of all submissions will be acknowledged.

Abstracts for papers will be reviewed on the basis of both their content and their relevance to the theme and subthemes of the conference.

Notification of acceptance of papers, posters and workshops will be made no later than March 31, 2002. Presenters will also be informed about the length of the presentations and guidelines for the preparation of manuscripts.

Proceedings: Abstracts of accepted papers, posters and workshops will be published before the conference. Conference proceedings, including presented papers and abstracts of posters, will be published shortly after the conference. Contributed papers will be limited to 10 pages, and must be submitted by August 11, 2002 for inclusion in the proceedings.

Information about the conference is provided at: http://www.ecf.utoronto.ca/apsc/enveng/enviro/. The anticipated conference registration fee will be approximately $250 U.S. or $400 Canadian. The registration fee for students will be considerably lower than this, and the conference organizers are seeking supplemental support to reduce the full registration fee.

Questions should be directed to the conference e-mail address **aeesp02@ecf.utoronto.ca** or by contacting Prof. Byer, Conference Chair, at (416) 978-5980.

Gordon Conference 2002
Environmental Sciences: Water
Chemical Reactivity and Bioavailability in Environmental Systems: Assessing the State of the Science for Metals and Organic Chemicals
June 23-28, 2002

Chair: Dominic M. Di Toro (Manhattan College)
Vice Chair: Deborah L. Swackhamer (University of Minnesota)

For those who are not familiar with the Gordon Conferences, they are unique and always enjoyable. The conference speakers are all invited. Papers are presented in the mornings and evenings. The afternoons are free for fun and games, scientific and otherwise. Unlike other conferences, there is only one session. Since the papers are all invited, they are invariably of high quality. It is considered an honor to be invited to speak at a Gordon Conference. Contrary to what is commonly believed, however, attendance is not by invitation. The procedure is as follows. A prospective applicant submits an application using the Gordon Conference web site, http://www.grc.uri.edu/ (Attending a Conference, On Line Application, Environmental Sciences: Water). The web site contains more information, or email me directly, dditoro@manhattan.edu.

International Conference on
Advances in Ozone Science and Engineering: Environmental Processes and Technological Applications
Hong Kong
April 15-16, 2002

This conference is being organized jointly by the International Ozone Association (IOA) and The Hong Kong Polytechnic University (Research Centre for Urban Environmental Technology & Management) and is sponsored by the Hong Kong Government. The conference will review all fundamental and applied aspects of ozone science and engineering, but particularly related to the following: atmospheric processes; urban air pollution; water, wastewater and industrial effluent treatment; advanced oxidation technologies; industrial applications; environmental impact effects; and regional case studies. For further information, see the conference web site (http://www. cse.polyu.edu.hk/rcuetm/ozone.htm) or contact Professor Nigel Graham, Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong; Tel: +852-2766-6010; Fax: +852-2334-6389; Email: cenigelg@polyu.edu.hk.

2002 Environmental and Water Resources Systems Analysis Symposium

Roanoke, Virginia
May 19-22, 2002

The 2002 Environmental and Water Resources Systems Analysis (EWRSA) Symposium will be held May 19-22, 2002 in Roanoke, Virginia, U.S.A., in conjunction with the ASCE EWRI 2002 conference. The symposium is sponsored by the EWRI Environmental and Water Resources Systems Committee, and will highlight advances across a broad spectrum of research areas, including:

- General Symposium on Environmental and Water Resources Systems Analysis
- Evolutionary Computation in Environmental and Water Resources Engineering
- Water Distribution Systems Analysis
- Systems Analysis of Climate Change Impacts
- Decision Support Systems
- Hydrologic Frequency Analysis
- Integrated Algorithms for Hydology, Hydraulics and Ecology

This 2002 call for papers attracted 160 abstracts from around the globe (see the symposium web site at http://www.ecn.purdue.edu/water2002). Another symposium is tentatively planned for 2003, in conjunction with the ASCE World Water and Environmental Resources meeting in Philadelphia, Pennsylvania. To receive the call for papers, please go to the above symposium web site and create a personal profile by selecting "Join Us Now."

Jim Uber
Symposium Technical Chair

Particulate Matter: Atmospheric Sciences, Exposure and the Fourth Colloquium on PM and Human Health

Pittsburgh, Pennsylvania
March 31-April 4, 2003

An International Conference Organized by the American Association for Aerosol Research (AAAR) Integrating Key Issues in PM. Sponsored by the EPA, DOE, NARSTO and other agencies and organizations.

Abstracts (300 words) due Oct. 18, 2002

The AAAR announces a major international conference that is designed to integrate the science and policy of airborne particulate matter (PM), including topics such as development of source-receptor relationships, atmospheric chemistry, long-range transport and transformation, air quality, exposure assessment, exposure modeling, epidemiology, toxicology, dosimetry, instrumentation, QA, data treatment, and newly emerging issues in PM.

To receive further information about the conference, please send your e-mail address to Ms. Karen Feder at AAAR Headquarters (kfeder@ahint.com).

NOTE: The AEESP membership application form is available online at **http://www.aeesp.org**, under "organization" and "membership" (http://bigmac.civil.mtu.edu/aeesp/org/membership.html).

Application for Membership

Association of Environmental Engineering and Science Professors

Name: _____

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____ Student Member Advisor: _____
____ Sustaining Member

PLEASE ATTACH A BRIEF (1-3 PAGE) CURRICULUM VITAE

Membership in AEESP is on a calendar-year basis. When you join the Association, you will be sent the current AEESP Membership Directory and previous Newsletters and other materials which have been sent to members during the year, if your application is received prior to October 1. If you join after October 1, your membership will begin the following calendar year, but the current AEESP Membership Directory will be sent to you immediately upon approval of your membership by the Association's Secretary. Upon retirement, members may apply to the AEESP Board for Emeritus membership if they have been AEESP members for at least 20 years, or have been a member for fewer years but have contributed substantially to AEESP through service on committees or as an officer.

RANK / STATUS	ANNUAL DUES
Regular Member (Professor)	$ 75.00
Regular Member (Assoc. Professor)	$ 60.00
Regular Member (Asst. Professor)	$ 40.00
Affiliate Member	$ 50.00
Student Member	$ 15.00
Sustaining Member	$500.00

Please return this form along with your dues and c.v. to the Secretary of AEESP:

Kim F. Hayes
Civil Engineering
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Ann Arbor, MI 48109-2125

Enclosed are my AEESP dues in the amount of U.S. $_____.

_____
Signature Date

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AEESP Sustaining Members

The *AEESP Newsletter* is published three times a year in January, April and September by the Association of Environmental Engineering and Science Professors. Issues are published online at **http://www.uidaho.edu/aeesp**.

Please send address changes to: Joanne Fetzner, AEESP Business Office, 2208 Harrington Court, Champaign, IL 61821; phone (217) 398-6969; fax (217) 355-9232; e-mail jfetzner@uiuc.edu.

Please send submissions and comments to the editor: Amy E. Childress, Ph.D., AEESP Newsletter Editor, University of Nevada, Reno, Department of Civil Engineering/258, Reno, NV 89557-0152; phone (775) 784-6942; fax (775) 784-1390; e-mail amyec@ unr.edu. Editorial Assistant: Cindy Lawrence, cynthial@ uidaho.edu.

To estimate the amount of lead time needed for your announcement, please note that members receive the newsletter 4-6 weeks after the submissions deadline.

Association of Environmental Engineering and Science Professors Newsletter
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