Association of Environmental Engineering and Science Professors

Newsletter

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President's Letter

It is a great privilege to become the president of AEESP, especially at a time when so many exciting activities are underway. Momentum has been established, a clear direction charted, and some of the most dedicated people I have had the pleasure to meet are working on a range of committees. I see my job, *first* and foremost, to maintain this momentum and enthusiasm. *Second*, outcomes from the Frontiers workshop and the Research conference need to be implemented. *Third*, we can expand our sphere of influence by continuing to build formal relationships with other organizations, including our traditional allies and others. And as a *fourth* objective, a Task Force is being formed to explore our conference needs. It is an ambitious agenda! Success will be possible, in part, by building off the existing foundation and the accomplishments during the terms of Bruce Logan and Kimberly Gray. However, it is ultimately the efforts of the members and their willingness to participate in the many projects that make all things possible!

The existing committees will be the vehicles for implementing outcomes from the 1999 Research Conference. Efforts to diversify membership, especially with our recent name change, are being initiated jointly through the Membership (Craig Adams, Chair) and Diversity (Udeme Ndon, Chair) Committees. When you take a close look at our membership, many of your colleagues who are environmental engineers or scientists are not listed. I ask you to help by recruiting your colleagues who are not members, but should be to ensure balanced representation of all of environmental engineering and science. To make this easier for you, we are assembling a packet of information that you can request be sent to individuals being recruited. We are also actively pursuing and have added several new members to our Sustaining Members list. Practitioner participation is a vital component for charting an appropriate path for AEESP. Several new education initiatives are underway including a draft of the "new" Processes Manual due out next fall that Sue Powers has been coordinating! The number of laboratory exercises submitted was almost overwhelming. We are continuing to push for legislative impact and the succinct statement drafted by Mort Barlaz articulates our organization's goals quite well. One of the most exciting and controversial committees has been Student Organizations (Jim Mihelcic). Both emotions are proof of our passion for education! Two options are emerging for student organizations: the honor society Tau Chi Alpha promoted and sponsored by AAEE, and a proposed organization that would act as an umbrella for diverse environmental interests. AEESP committee activities are providing opportunities to impact education, research, and the profession at large. Pick a committee and get involved!

Environmental Engineering is still not well recognized as an independent discipline in many professional circles. We have an identity problem. Are we civil, chemical, or mechanical engineers or ecologists, environmental chemists or biologists? The answer is yes, we are all of these and more. But we, e.g. AEESP, are not recognized. Kimberly has worked hard to get us on NSF's radar screen and in so doing has garnered the attention of others that want to join forces with us. Kimberly and I are attending the American Association of Engineering Societies meeting where AEESP's request to become a full member will be voted on at their Board meeting. We are currently developing a Memorandum of Agreement with AIDIS and exploring a similar relationship with the Water Environment Research Foundation. The American Academy of Environmental Engineers has taken measures to make it easier for faculty to join their membership by eliminating the oral examination previously required for affiliate status. AAEE is considering other changes and I am working with their president, Bill Boyle, to improve relations between the two organizations. AEESP will also be approaching other organizations to build alliances. The thinking is that the combination of voices on issues of concern to the profession will be more effective than "going it alone."

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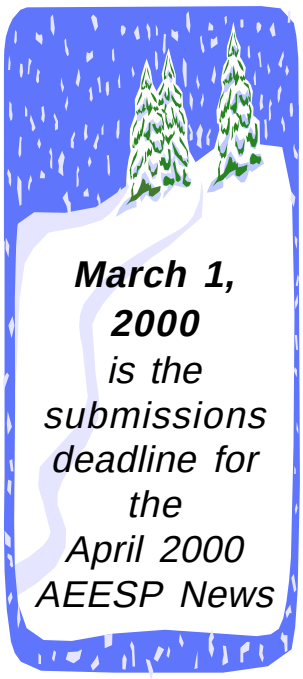
In this issue...



(continued from page 1)

Environmental Engineering and Science as a discipline has many homes. The positive aspect of multiple homes is the enrichment that cross-disciplinary knowledge brings to the discipline. The negative aspect is that the environmental engineers do not regularly meet at a single location. Several in the membership have expressed the frustration that of all the conferences we have to choose from to attend, there really is not a single one to satisfy all of environmental engineering and science. I am seeking volunteers to participate in a Task Force to examine the need for an Environmental Engineering and Science Conference and determine if AEESP is the appropriate group to sponsor such an event. Our next conference (scheduled for 2002) will be the first combined Education and Research Conference. Please contact me if you would like to participate on this committee. There will be a call for proposals for the next conference coming out shortly. Consider hosting this event!

You recently received a mailing that includes a call to vote on the proposed Mission Statement. The Mission Statement was drafted during the Board's Strategic Planning Meeting held subsequent to the Conference at Penn State in August. Remarkably this statement came together with relative ease. It is the opinion of the Board that this statement is a clear definition of the driving purpose of the organization. Slight modifications were made to the original Goals in the by-laws that also require your approval. A membership survey will be sent in January that has been carefully crafted to solicit your input on how to keep improving the organization as it serves you, academia, and the environmental community. I urge you to vote on the Mission Statement and fill out the survey. Responses to the past surveys have been very helpful and I am confident your opinions will provide guidance to the AEESP Board as we plan for the future.

We have had a good friend in NSF for many years who will be missed. Dr. Ed Bryan announced his retirement. Many an AEESP special event has been jointly or solely sponsored by NSF largely due to Ed's ability to find the funds to support what he felt were worthy endeavors. Our organization and members have benefited greatly from this support. Please join me in wishing Ed well in retirement and offering our thanks for his support over the years. I would also like to bring to your attention that his position is being advertised. It would be an excellent opportunity for a member of AEESP as well as providing representation of the discipline in an influential position at NSF. If not you, perhaps you know of a colleague who should be encouraged to apply for this position.

AEESP is ready for the new millenium! The Frontiers Workshop and the Penn State Conference have crystallized our vision of the environmental engineering and science challenges to address in the future. AEESP has always been supportive of educational needs and will continue to provide teaching aids to facilitate addressing the new challenges. Having identified key emerging research arenas, we will be working to influence national agendas to ensure that the environmental needs of the future can be met. AEESP is your organization. I urge you to get involved with any of the many programs underway or propose new initiatives for action. Your suggestions and ideas are always welcome and I look forward to the opportunity to discuss them with you. I want to thank all of you who have worked so hard to make AEESP the fine organization that it is today. The year 2000 is going to be a good one and the best is yet to be!

Happy New Year!
Robin Autenrieth
Texas A&M University
r-autenrieth@tamu.edu

AEESP becomes member of AAES

On December 3, 1999, the Board of Governors of the American Association of Engineering Societies (AAES) voted to accept AEESP's application for membership. AAES is an umbrella organization of approximately 20 national engineering societies. ASCE and AIChE are among its founding members. The primary mission of AAES is to be the advocate of the engineering professions particularly in the area of public policy and public awareness. A high priority of AAES is to work to increase the research funding in the engineering area, which is only a fraction of the research funding in human health. In addition, AAES has developed an ambitious program to address the lack of general societal knowledge as to what engineering is and what engineers do.

"The Environment" is one of the areas of activity on the AAES Public Policy Council and the area in which AEESP will seek to provide leadership. It is our hope that membership in AAES will heighten AEESP's national profile, as well as provide our organization with greater access to events in Washington and influence in governmental policy.

Kimberly Gray

1999 AEESP Awards

The following awards were presented by AEESP President Kimberly Gray, except as noted:

1999 Founders' Award

Vernon L. Snoeyink, University of Illinois -- For sustained and outstanding contributions to environmental engineering education

1999 Outstanding Publication Awards

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

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

*AEESP Distinguished Service Awards

David Dzombak -- For outstanding service as the AEESP Treasurer from 1997-1999
Charles O'Melia -- In recognition of strategic planning for AEESP and the Frontier's Workshop
Richard Luthy -- In recognition of strategic planning for AEESP and the Frontier's Workshop
Aarne Vesilind -- For outstanding AEESP book reviews and strategic planning
Steve Randtke -- For distinguished service in writing an administrative handbook for AEESP
Fred S. Cannon -- For organizing the 1999 AEESP Research Frontiers Conference
Bruce Logan -- For organizing the 1999 AEESP Research Frontiers Conference
Nancy Love -- For outstanding service on the AEESP thesis evaluation committee (1997-1999)
Daniel Cha -- For outstanding service on the AEESP dissertation evaluation committee (1998-1999)
Kimberly Gray -- For outstanding service as the AEESP President from 1998-1999
**Presented by incoming AEESP President Robin L. Autenrieth*

AEESP/CH2M Hill Outstanding Doctoral Dissertation Award

"The Effects of Varying Influent Phosphate and Acetate Concentrations on Enhancing Biological Removal of Phosphate from Wastewater."
Andrew J. Schuler
Advisor: David Jenkins

AEESP/Parsons Engineering Science Outstanding Doctoral Dissertation Award

"Characterizing the Properties and Reactions of Natural Organic Matter by UV Spectroscopy: Adsorption of NOM and Formation of Disinfection By-products."
Chi-Wang Li
Advisors: Mark M. Benjamin and Gregory Korshin

AEESP Outstanding Dissertation Award, Honorable Mention

"Monochloramine Loss in the Presence of Ferrous Iron: Kinetics, Mechanism, and Products."
Peter Vikesland
Advisor: Richard Valentine

AEESP/Montgomery-Watson Master's Thesis Award

First Place:
"Application of Molecular Tools for the Analysis of Biological Foaming in Activated Sludge."
Daniel B. Oerther
Advisor: Lutgarde Raskin
Second Place:
"Optimization of Coagulation Conditions for the Removal of Algae in Conventional Water Treatment."
David Briley
Advisor: Detlef Knappe

AEESP Founders' Award

Vernon L. Snoeyink, Professor at the University of Illinois, was awarded the 1999 AEESP Founders' Award at the Annual Meeting. This award is given annually to recognize an AEESP member who has made "sustained and outstanding contributions to environmental engineering education and the profession."

To make a nomination for the 2000 AEESP Founders' Award, contact the chair of the awards committee: Marc Edwards; Department of Civil and Environmental Engineering, 407 NEB; Virginia Tech; Blacksburg, VA 24061-0246 before March 15, 2000. Marc's e-mail address is: edwardsm@vt.edu. After careful consideration of nominees by an AEESP subcommittee, the 2000 award will be presented at the annual October meeting.

Previous recipients of the AEESP Founders' Award are:

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

Montgomery Watson Consulting Engineers M.S. Thesis Awards

Entries are sought for the 2000 Montgomery-Watson 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 case prize for the first place award is $600 for the student and $300 for the faculty advisor, while the cash prize for second place is $400 and $200, respectively. Faculty advisors wishing to nominate a student for this competition should send three copies of the thesis to: Elizabeth Carraway, Assistant Professor, Clemson University, 509 Westinghouse Road, Pendleton, SC 29670.

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 latter statement is especially important if multiple authors contributed to the work under consideration. The copies will not be returned, so inexpensively bound xerographic copies are recommended. The deadline for submission is March 15, 2000 for theses completed during the 1999 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 1998 MS Thesis Review Panel: Nancy Love (Chair), Elizabeth Carraway and Fred Cannon.

AEESP Outstanding Paper Award

Nominations are sought for the 2000 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: Marc Edwards; Department of Civil and Environmental Engineering, 407 NEB; Virginia Tech; Blacksburg, VA 24061-0246. Marc's e-mail address is: edwardsm@vt.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 June 1, 2000.

According to the current rules of the competition, 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 1990 are:

1990 O'Conner, Donald J., "Oxygen Balance of an Estuary," J. San. Engrg. Div., ASCE, 86, SA3, 35-55, May 1960.

1991 Yao, K.M., M.T. Habibian, and C.R. O'Melia, "Water and Waste Water Filtration: Concepts and Applica tions," Envir. Sci. & Tech., 5(11), 1105, May 1971.

1992 Argaman, Y., and W.J. Kaufman, "Turbulence and Flocculation," J. San. Engrg. Div., ASCE, 96, SA2, 223-241, April 1970.

1993 Stevens, A.A., and J.M. Symons, "Measurement of Trihalomethane and Precursor Concentration Changes," Jour. Amer. Water Works Assn., 69:10:546, 1977.

1994 Morel, F.M.M., and J.J. Morgan, "A Numerical Method for Computing Equilibria in Aqueous Chemical Systems," Envir. Sci. & Tech., 6:58-67, 1972.

1995 Sezgin, M., D. Jenkins, and D.S. Parker, "A Unified Theory of Filamentous Activated Sludge Bulking," Jour. Water Poll. Con. Fed., 50, 2, 362-382, 1978.

1996 Rajamani Rajagopalan and Chi Tien, "Trajectory Analysis of Deep-Bed Filtration with the Sphere-in-cell Porous Media Model," AIChE Journal, 22, 523-533, 1976.

1997 Amirtharajah, A. and K.M. Mills, "Rapid-Mix Design for Mechanisms of Alum Coagulation," Journal Amer. Water Works Assn., 74 (4) 210-216, 1982.

1998 Bouwer, E.J., and P. McCarty, "Removal of trace chlorinated organic compounds by activated carbon and fixed-film bacteria." Environmental Science & Technology, 16 (836-843) 1982.

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).

Please take a few moments to 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 Engineering Science Doctoral Dissertation Awards

CH2M Hill Outstanding Doctoral Dissertation Award

Entries are sought for the 2000 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: Thomas M. Holson, Professor, Civil and Environmental Engineering, Clarkson University, 273 W.J. Rowley Labs, P.O. Box 5710, Potsdam, NY 13699.

Copies of dissertations 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, 2000 for dissertations completed during the 1999 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 points allocated as follows: scientific and technical merit of the research-30 points; originality of research - 30 points; contribution to advancement of environmental engineering - 30 points; and, clarity of presentation -10 points. The selections will be made by September so that the recipients and their advisor can attend the AEESP awards ceremony at the WEF annual conference. Our thanks to Engineering Science and CH2M-Hill for their generosity in sponsoring these awards and to members of the 1998 Doctoral Dissertation Review Panel: Daniel Cha (Chair), Thomas Holsen and Paige Novak.

AEESP to offer two new awards

AEESP Outstanding Educator Award

As an association of Environmental Engineering and Science professors, we recognize that our entire membership aspires to outstanding teaching. While there are several who have achieved the status of "master teacher," a few individuals stand at the pinnacle of teaching effectiveness and work diligently to help other professors. Our association is deeply indebted to these individuals. Consequently, AEESP will begin offering an award for the "Outstanding Environmental Engineering and Science Educator" in 2000.

The stated purpose of this award is "to honor an individual who is making outstanding contributions to the teaching of environmental engineering, both at the individual's home institution and beyond." The award favors nominations of faculty at the assistant and associate professor level who are actively teaching large undergraduate classes and developing innovative instructional methods, although all nominations will be considered. Only members of AEESP are eligible to receive this award. An individual may receive the award only once; previous winners are ineligible. The award will consist of a plaque and a check for $1000, to be presented at the WEFTEC Conference in October.

The deadline for nominations to be assured of full consideration will be March 15, 2000. Nominations can come from former students and professional colleagues, and should be sent to: Marc Edwards, Chair, AEESP Awards Committee, 407 NEB, Dept. of Civil Eng., Virginia Tech, Blacksburg, VA 24061-0246; e-mail: Edwardsm@vt.edu.

AEESP Frontier Award in Research

In recent years the complexity and diversity of environmental problems has become self-evident. There is a significant opportunity for our membership to reach out and apply environmental engineering principles to areas well outside our traditional expertise. Likewise, our membership has a significant opportunity to apply innovative techniques from other disciplines when solving environmental engineering problems. While these activities incur high risks they also have the potential for significant rewards. For those who have had the courage to take significant risks and who were successful in doing so, AEESP offers "The Frontier Award in Research" in 2000.

The stated 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 will be March 15 for full consideration by the AEESP Awards Committee, and should be submitted to: Marc Edwards, Chair, AEESP Awards Committee, 407 NEB, Dept. of Civil Eng., Virginia Tech, Blacksburg, VA 24061-0246; e-mail: Edwardsm@vt.edu.

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.

AEESP Year 2000 Distinguished Lecturer

Sponsorship of the Year 2000 AEESP Distinguished Lecturer: Dr. C.H. (Herb) Ward, Foyt Family Chair of Engineering, Rice University, MS 316, 6100 Main St., Houston, TX, 77005-1892.

Dr. Ward is the Foyt Family Chair of Engineering and Director of the Energy and Environmental Systems Institute, Director of the DOD Advanced Applied Technology Demonstration Facility, Director of the National Center for Ground Water Research, and Co-Director of the Hazardous Substances Research Center/South & Southwest at Rice University. He has also served as President of both the American Institute of Biological Sciences and the Society for Industrial Microbiology. He is founder and Editor-in-Chief of the international journal, Environmental Toxicology and Chemistry. He has also served on the EPA Science Advisory Board, has chaired and served on National Research Council Committees on environmental remediation, and leads the SERDP Scientific Advisory Board.

Dr. Ward has provided two possible seminars for his tour. These are:

Seminar 1. Environmental Remediation Technology Development: National Needs, Opportunities, and Challenges

The national mandate, driven by Superfund and RCRA, to clean up contaminated soils and ground water has been accomplished with minimal use of advanced or innovative remediation technology. But only the easy problems have been solved - the recalcitrant ones associated with chlorinated solvents, DNAPLs, and radionuclides remain.

The general concensus is that extraction and above ground treatment (pump and treat) is more appropriate for ground water plume management than for remediation. Current technology development is now focused on biochemical and physical-chemical processes for in situ degradation and immobilization of contaminants and on surfactant and co-solvent enhanced extraction methods for NAPL source removal.

The current status of environmental remediation technology development in the U.S. will be analyzed using examples drawn from major national programs: Strategic Environmental Research and Development Program (SERDP), Environmental Security Technology Certification Program (ESTCP), Advanced Applied Technology Development Program (AATDF), Superfund Innovative Technology Evaluation Program (SITE), Air Force Center for Environmental Excellence (AFCEE), Army Environmental Center (AEC), Department of Energy-Environmental Management Program (DOE-EM).

Contrary to popular belief, the pipeline is not full of good ideas for new cost-effective remediation technologies, and few new technologies make it through the "valley of death." Also, commodity pricing of environmental remediation limits the use of new technologies which are often considered inadequately tested. Regardless, the opportunities for federal funding for new environmental technology development are both diverse and substantial.

Seminar 2. Bioattenuation of Contaminants in the Subsurface: Strategies for Engineering Control

Natural attenuation, or the reduction in concentration or mass of contaminants by natural, non-engineered mechanisms, has been identified as the lowest cost option for managing risks associated with subsurface contaminants. Some consider this non-intrusive process as a "do nothing" or "walk away" approach to environmental remediation. While advection, dispersion, dilution, and sorption reduce contaminant concentrations in ground water, biodegradation is the mechanism responsible for most contaminant mass reduction. However, the rate or extent of bioattenuation of specific contaminants may be inadequate to achieve concentrations protective of human health and the environment. The emphasis of process engineering has shifted from delivery and utilization of electron acceptors to enhance bioattenuation rates of petroleum-related compounds to the development and utilization of electron donors in anaerobic environments to limit the dimensions of chlorinated solvent plumes.

Both biochemical and physical-chemical methods are proving to be useful in managing source zones, including the NAPL phase. Coupling of these processes in treatment trains may be feasible; however, delivery system efficiency will ultimately control both remediation costs and the results obtained. A national competition in bioattenuation technology development is in progress. The current status of development will be assessed using results from recent field technology demonstrations, including in situ permeable reactive barriers, gaseous hydrogen injection, slow release electron donors, and others.

Institutions interested in hosting Dr. Ward should send a letter request with appropriate documentation by November 17, 1999 to: Makram T. Suidan, Chair, AEESP Distinguished Lecturer Committee, Department of Civil and Environmental Engineering; University of Cincinnati, Cincinnati, OH 45221-0071; Email: makram.suidan@uc.edu; Telephone: (513) 556-3695; Fax: (513) 556-2599.

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.
3. Identity of possible co-sponsors.
4. Arrangements for publicity, accommodations and possible videotaping of lecture.

5. A brief statement describing how a visit by Dr. Ward 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 $850 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.

Makram T. Suidan, Chairman
AEESP Distinguished Lecturer Committee

AEESP Diversity Committee

Dear AEESP Members,
Below is the objective and tasks that have been developed for the Diversity Committee by members of the committee. The secretary, Dr. Shelly Miller, was responsible for compiling all the suggested tasks and objectives. Thanks to Dr. Miller and the implementation team for working with me to produce the information provided below.

I would like AEESP members to send me any suggestions or comments on the objective and tasks presented below. Thank you.

Udeme J. Ndon, Committee Chair
Civil & Environmental Engineering Department
San Jose State University
San Jose, California 95192-0083
Phone: 408-924-3863; Fax: 408-924-4004
E-mail: ujndon@email.sjsu.edu
Website: www.engr.sjsu.edu/faculty/ndon.htm

Association of Environmental Engineering and Science Professors Diversity Committee

Objective: To enhance student and faculty diversity (with respect to enthnicity and gender) in environmental engineering and science.

Short Range Tasks (within approximately 2 years):

1. Determine the specific needs of the committee; set our objectives, and define what we mean by diversity and the nature of the target groups.
2. Determine the current state of diversity in environmental engineering and science (EES) faculty, students, and practitioners within the United States.
3. Compare (gender and ethnic) representation in environmental engineering with that of other engineering disciplines.
4. Generate a list of minority and women in the Association.

Long Range Tasks (> 5 years):

1. Enhance student diversity in identified target groups (undergraduate and graduate levels) through aggressive recruiting.
2. Develop a brochure that can be made available to students from under-represented groups (print and web-based). This could provide students with names of appropriate "contacts" or mentors for individuals of various ethnicity and gender, listed by geographical area, including academicians and practicing environmental engineers and scientists.
3. Develop a plan for precollege outreach efforts that can target minority students in high school and middle school.
4. Develop means to enhance the interest and enrollment of minority and female students in environmental engineering and science graduate programs.
5. Develop community outreach on environmental issues (both in research and teaching) as a way to increase the visibility and to establish the relevance of EES within minority communities.

Other Tasks:

1. Establish voluntary mentor networks between junior faculty and more established faculty.

Members of the Diversity Committee who contributed to the development of the objective and tasks:

Udeme Ndon, Shelly Miller, Inez Hua, Solomon Leung, Janet Hering, Craig Adams, Sharon Long, Bill Ball, Nick Giardino, Flynn Picardal

Committee Members:

Udeme J. Ndon, Chair - San Jose State University
Shelly Miller, Secretary - University of Colorado at Boulder
Inez Hua - Purdue University
Flynn Picardal - Indiana University
Teresa Cutright - University of Akron
David Yonge - Washington State University
Scott Summers - University of Colorado at Boulder
Dennis Truax - Mississippi State University
Janet Hering - California Institute of Technology
Criag Adams - University of Missouri-Rolla
Bill Ball - John Hopskin University
Sharon Long - University of Massachusetts
Solomon Leung - Idaho State University
Charles Glass - University of Nevada-Reno
Kim Hayes - University of Michigan
Christina Behr-Andres - University of Alaska-Fairbanks
Kimberly Jones - Howard University
Jeff Peirce - Duke University
Sotira Z. Yiacoumi - Georgia Institute of Technology
Gail Montgomery Brion - University of Kentucky
Nick Giardino - IERA/RSRE, Brooks Air Force Base

Members of the Committee's Implementation Team:

Udeme Ndon, Chair; Shelly Miller, Secretary; Inez Hua; and Flynn Picradal.

Publication of AEESP lab manual underway

AEESP has undertaken a project to write a new Environmental Engineering Processes Laboratory Manual. The manual is being written by AEESP members as a document that provides a tool for students and a time saver for faculty. The manual will also serve as a means of publishing our efforts to develop relevant and meaningful laboratory experiences for our students.

Abstracts for over 50 labs have been submitted for this manual. The subject matter covers a range of traditional environmental engineering processes (e.g., sedimentation, kinetics of microbial degradation), as well as some emerging topics (e.g., phytoremediation). They also cover a range of educational levels and include both wet laboratories as well as computer exercises.

Labs will be reviewed in the Spring of 2000 with a "beta" version available for Fall 2000 classes and the manual completed by Fall 2001. AEESP members who are interested in reviewing a laboratory are needed. Please contact Susan Powers (sep@clarkson.edu) to volunteer.

AEESP membership survey

In early January you will be receiving a survey that Craig Adams and his membership committee developed to determine your level of satisfaction with AEESP and to find out what other issues and activities we need to pursue. It is VERY important that we hear from you, especially in light of all the changes that have taken place over the last couple of years. The information gathered from this survey will shape our membership recruiting efforts, our planning of workshops and conferences, and our initiatives with other professional associations. Most importantly, we hope that you will tell us what we need to be doing. Please fill out the survey and promptly return it to Craig Adams. We hope to be able to publish the results in the Spring Newsletter.

AEESP membership drive

How many of your colleagues are members of AEESP? When I looked around at the Environmental Engineering group at Northwestern I was surprised to discover that six of my colleagues were not members. I promptly loaned them my copy of the newsletter, gave them an application form, and urged them to become a member. I have sent out letters to many of you encouraging you to do the same. Craig Adams had compiled a list of professors who are in the program directory, but who are not members. They, too, will receive letters of invitation to become AEESP members.

The AEESP is the major professional organization of university engineering faculty members responsible for training technically-skilled environmental professionals. Our members come from more than two hundred institutions of higher education and are diverse in background and training with the environment serving as the common focus.

As you may know, AEESP provides the following unique benefits for environmental engineering faculty members and students who plan a career in academia:

- Connection to the community of environmental engineering educators through the AEESP Newsletter, E-mail List, and Membership Directory. The Membership Directory is a highly valuable resource and alone can justify the modest cost of membership.
- Opportunities to interact with and get to know colleagues in environmental engineering education from the United States and other countries via participation in AEESP conferences and service on AEESP committees.
- Professional development opportunities via our conferences on environmental engineering education and research directions.
- Access to environmental engineering education resources developed by AEESP committees.

Additional information about AEESP and other benefits of membership are presented on our AEESP web page, http://www.aeep.org.

The next few years are critical for redefining the environmental engineering field and for expanding our research support. As you are probably aware, AEESP has been working diligently to enhance its national profile and that of environmental engineering. It is important for us to represent as completely as we can the academic community populating environmental engineering and science. Please encourage your colleagues and students to become AEESP members.

Kimberly Gray

NRC groundwater report available

The National Research Council has completed a new study called "Groundwater and Soil Cleanup: Improving Management of Persistent Contaminants." The study, conducted by the Committee on Technologies for Cleanup of Subsurface Contaminants in the DOE Weapons Complex, Board on Radioactive Waste Management, Commission on Geosciences, Environment, and Resources, was chaired by Herb Ward, Foyt Family Chair of Engineering at Rice University. Other AEESP members who participated in the study include Herb Allen, University of Delaware; Randy Charbeneau, University of Texas-Austin; Richard Conway, Union Carbide; and Fred Pohland, University of Pittsburgh. Results of the study in book form can be ordered from the National Academy Press, 2101 Constitution Avenue NW, Washington DC 20418.

Thank you new and renewed sustaining members

Welcome Joe Eckenrode of Technomics Publishing Company and Glen Reinhardt of Water Environment Research Foundation who have recently become AEESP sustaining members. Thank you Eric Munson and McGraw-Hill, Inc. who have renewed their Sustaining Membership by agreeing to fund one of our new Educator Awards. Welcome back to Stewart Rykman of REACT Environmental Engineers who renewed their membership after several years of absence.

Thank you to CH_2M Hill, Montgomery Watson, Inc., and Parsons Engineering Science, Inc., for continuing to support our awards to graduate students and their advisors in recognition of research excellence. Thank you to Carollo Engineers for their contribution to support the WEFTEC Meet and Greet at which we make these awards. We are also deeply appreciative of the support we receive from Camp, Dresser & McKee who sponsor the AEESP Seminar Speaker at WEFTEC and from Black & Veatch who sponsor the AEESP Research Seminar Speaker at AWWA each year. All of these contributions are vital in helping AEESP achieve its educational and research mission.

If you would like to suggest that an organization become a Sustaining Member, please contact one of the board members. Following is a summary of some of the benefits of an AEESP membership to companies.

Benefits of AEESP sustaining membership

1. All Sustaining Members (SM) are sent a copy of the AEESP membership directory, allowing the SMs access to the phone numbers, email addresses, fax numbers, and areas of expertise of all AEESP members.
2. SMs are invited to attend all AEESP functions. Many SMs have a booth at the tri-annual AEESP research and education conferences, which are attended by most Environmental Engineering programs. (We are contemplating making these every other year.)
3. SMs receive all our regular mailings and announcements. This includes both US post materials, and email.
4. SMs receive one complimentary set of preprinted mailing labels each year. Additional sets of mailing labels are $50 each.
5. SMs may send email messages of appropriate content to all AEESP members.
6. All SMs are prominently listed in every AEESP newsletter, and the AEESP directory (good publicity).
7. All SMs are listed on the AEESP www site, with links to their www sites if desired. The web site has a job listing page and is a great recruiting tool.
8. SMs learn about latest research and education opportunities in the major Environmental Engineering programs in the US and Canada, as well as developments nationally and internationally.

Board Highlights / Election Results

- On October 9 and 19, 1999 the AEESP Board of Directors met at the Riverside Hilton in New Orleans. This meeting preceded the Water Environment Federation's annual Conference. Present were Kimberly Gray (President), Robin Autenrieth (Vice President), Bruce Logan (Past President), David Dzombak (Treasurer), Kurt Paterson (Secretary), Susan Powers, Gerald Speitel, Michael Aitken, Domenico Grasso, Lisa Alvarez-Cohen, John Novak. Not present were Jerald Schnoor and Debra Reinhart.
- The Board election vote resulted in a 46% voter response. New Board members Gerald Speitel, Michael Aitken and Lisa Alvarez-Cohen were welcomed.
- Membership renewal rate was down slightly from 93% to 89%. Reminder letters will now be sent and a new option will be offered to charge dues to a credit card.
- A small profit was made from the Penn State conference. It was decided to use some of the funds to mail the proceedings to all members and establish a travel fund for assistant professors to attend the 2002 Education/ Research Conference. Additional copies of the proceedings can be obtained from Joanne Fetzner.
- The Strategic Planning meeting was considered to be quite successful and it was decided to hold one following every AEESP Conference.
- The Logo Contest was a good idea, but enjoyed little participation from the membership. Those that voted clearly preferred modification to the existing logo rather than adopting a new logo. The 'old' logo will be modified to include the 'S' of our new name.
- The Environmental Engineering Process Manual will be beta-tested in Fall 2000 at several schools. It will also be available on CD-Rom and modularized for use.
- Robin Autenrieth was elected President, Domenico Grasso was elected Vice President, and Gerald Speitel was elected Treasurer. Terms of service are 1999-2000, 1999-2000, and 1999-2001, respectively.
- The Board was visited by two members and a new sustaining member. Bill Batchelor presented a plan to produce a variety of multimedia resources to be made available to AEESP members. Jim Mihelcic presented the history and current goals of the Student Organization committee. Representing WERF, Glen Reinhardt discussed an interest in partnering between the two organizations.
- There was lengthy discussion on how best to respond to the NSB report from NSF. A Task Force was to review the report and provide substantive comments.

Comings & Goings

Bucknell University

We are pleased to announce that **P. Aarne Vesilind** has joined Bucknell University as Professor of Civil and Environmental Engineering, and the R. L. Rooke Chair in the Historical and Societal Context of Engineering, effective January 1, 2000. His address will be Department of Civil and Environmental Engineering, Bucknell University, Lewisburg, PA 17837; phone: 570-577-3827; fax: 570-577-1822; e-mail: vesilind@bucknell.edu.

California Polytechnic State University

Yarrow Nelson has begun working as an assistant professor in the Department of Civil and Environmental Engineering at the California Polytechnic State University in San Luis Obispo. He will be teaching courses in environmental engineering, bioengineering, mass transport and environmental chemistry. He plans to continue research on the biogeochemistry of Mn oxides and trace metal adsorption and also to pursue applied research projects in bioremediation and pollution prevention. Yarrow was previously working as a lecturer and research associate at Cornell University.

Clemson University

Environmental Engineering and Science at Clemson University is pleased to have **Dr. Christos Christoforou** (csc@clemson.edu) join us as an Assistant Professor. Christos received his M.S. and Ph.D. in Mechanical Engineering from California Institute of Technology and B.S. from Rice University in Mechnical Engineering. His areas of interest include air pollution characterization, atmospheric pollutants and environmental health issues, sampling, computer modeling, and protection of archaeological sites from the effects of air pollution. He will be teaching environmental engineering and air pollution courses.

Environmental Engineering and Science at Clemson University is also pleased to announce the promotion and granting of tenure to **Dr. Cindy Lee** (lc@clemson.edu). Cindy came to the department as a post-doc, then became an Assistant Professor after obtaining her Ph.D. from Colorado School of Mines in Geochemistry. Cindy's major teaching and research interests are the chemistry of environmentally significant organic compounds and environmental analytical chemistry. Her specific research interests involve the fate and transport of pesticides and petroleum in the environment, the remediation of non-aqueous phase liquids (NAPLs), and the role of natural organic matter in the transformation of contaminants.

On October 1, 1999, **Mark A. Schlautman** began a new faculty appointment in the Department of Agricultural and Biological Engineering at Clemson University. He will be teaching and performing research in the department's concentration area of natural resources engineering. He will also have a joint appointment in the Department of Environmental Toxicology and the Clemson Institute of Environmental Toxicology where his activities will be in the areas of environmental chemistry and water/soil quality.

Dr. Schlautman continues to be a member of the American Chemical Society (environmental chemistry, geochemistry, and colloid and surface chemistry divisions), the American Geophysical Union (hydrology division), the Society of Environmental Toxicology and Chemistry, the American Water Works Association, the Water Environment Federation, and AEESP. In 1999, Schlautman was selected to to be a recipient of a National Science Foundation CAREER award. Prior to his appointment at Clemson, he was a faculty member at Texas A&M University in the environmental engineering program area.

His current contact information is: Dr. Mark A. Schlautman, Agricultural and Biological Engineering Dept., 212 McAdams Hall, Box 340357, Clemson University, Clemson, SC 29634-0357; phone: 864-656-4059; fax: 864-656-0338; e-mail: mschlau@clemson.edu.

University of Connecticut

In Fall 1999, **Allison MacKay** (Ph.D., MIT, 1998) joined the faculty of the Department of Civil and Environmental Engineering at the University of Connecticut. Her research interests focus upon the fundamental phase transfer and attenuation processes acting upon organic contaminants in groundwater at complex sites. Professor McKay's teaching interests include aquatic chemistry and environmental organic chemistry.

Duke University

Duke University is pleased to announce the appointment of two new members of its faculty in environmental engineering. **Professor Karl Linden** joined Duke in August 1999 and **Professor Andy Schuler** arrives on the Duke campus in February 2000.

Professor Karl G. Linden received his M.S. and Ph.D. in Civil and Environmental Engineering at the University of California at Davis where he worked with Professors Jeannie Darby and George Tchobanoglous on UV disinfection for wastewater. He received a B.S. from Cornell University in Agricultural and Biological Engineering where he worked with Professor Bill Jewell on anaerobic digestion technologies. Professor Linden is currently investigating the applica-

tion of emerging ultraviolet technologies for disinfection of water and wastewater and control of disinfection by-products. Specifically he is developing physical and photochemical methods to evaluate UV dose from polychromatic UV systems and evaluating the efficacy of UV radiation for inactivation of persistent pathogens such as *Cryptosporidium*. In addition, the impacts of UV and advanced oxidation on organics, taste and odor compounds, and DBPs in water is under study. Professor Linden serves on the editorial board of UV News, the US EPA UV Disinfection Technical Working Group Advisory Committee, the IUPAC Photochemistry sub-group on UV Disinfection, and the NC WEA/AWWA-Student Activities Committee. He is also a founding board member of the International Ultraviolet Association (IUVA).

Prior to his arrival at Duke, Professor Linden was an assistant professor at the University of North Carolina at Charlotte. He received numerous awards, including UNC-Charlotte Junior Faculty Research Fellowship, New Century Scholars Fellowship from Stanford and the National Science Foundation, Trojan Technologies UV Fellow, Switzer Environmental Fellowship, the UC Davis Chancellors Teaching Fellowship, the Professional Studies Program in India Fellowship from UC Berkeley, and a National Science Foundation Research Experience for Undergraduates Award.

Professor Andrew Schuler received his M.S. and Ph.D. in Civil and Environmental Engineering from the University of California at Berkeley. His doctoral research with Professor David Jenkins concerned the metabolism of enhanced biological phosphorus removal from wastewater and the effects varying influent conditions on microbial storage products, as well as the effects of increased phosphorus content on biomass density and solids settling. His B.S. is in Civil and Environmental Engineering from the University of Colorado at Boulder, where he worked with Professor Tissa Illangasekare on modeling of subsurface contaminant transport. Currently, he is completing a one-year post-doctoral position at the University of Tokyo, where he is pursuing his interests in the characterization of microbial communities involved in biological wastewater treatment using molecular techniques such as denaturing gradient gel electrophoresis (DGGE) and fluorescent *in-situ* hybridization (FISH) with rRNA-targeted oligonucleotide probes. His recent research combines density segregation of bacterial populations with molecular techniques to identify functional groups of bacteria. Dr. Schuler's stay in Japan has also included bike touring on the island of Hokkaido and trekking in Nepal. Upon his return to the US in February 2000 to join Duke's Department of Civil and Environmental Engineering, Professor Schuler looks forward to further developing the use of molecular techniques as tools for characterizing microbial systems. Specifically, the relating of molecular ID information to biological treatment system behaviors such as the accumulation of microbial storage products, operation of different biochemical pathways, and nutrient removal will be targeted to improve system design and operation.

Professor Schuler is a registered Civil Engineer in the State of California, and worked for four years for the engineering consulting firm CH2M HILL, where he focused on hydraulic, hydrologic and wastewater engineering. Dr. Schuler was recently awarded the 1999 CH2M-HILL/ Association of Environmental Engineering and Science Professors Doctoral Thesis Award. He was also the recipient of a US EPA Science to Achieve Results Fellowship, a UC Berkeley Regents Fellowship, the CU Boulder Civil and Environmental Engineering Outstanding Graduate (Eckel) Award, and was a Boettcher Foundation Scholar and a National Merit Scholar.

Manhattan College

Dominic M. Di Toro, research professor of environmental engineering at Manhattan College and a principal consultant at HydroQual, Inc., has been named the first holder of the Donald J. O'Connor Endowed Faculty Chair of Environmental Engineering at Manhattan College.

The Chair honors Dr. O'Connor, Board of Trustee distinguished professor of environmental engineering and science at Manhattan College, who died in April 1997. Internationally known for his work in water quality analysis and control, Dr. O'Connor developed the first theory for independently calculating the exchange of oxygen into streams and rivers which is now viewed as the fundamental mathematical model for explaining the process. His most lasting accomplishment was his solution to the estuary problem--how to mathematically model dissolved oxygen in estuaries, a complex problem due to estuarine tidal motion, stratification, and irregular geometry. For this and other contributions, Dr. O'Connor was elected to the National Academy of Engineering.

A resident of Englewood, New Jersey, Dr. Di Toro joined the faculty of Manhattan College in 1969 and received his B.E.E. from Manhattan College and his M.A. and Ph.D. from Princeton University. He has received several awards for outstanding publications in professional journals from the American Society of Civil Engineers and the International Association for Great Lakes Research. In 1997, the Society of Environmental Toxicology and Chemistry (SETAC) presented Dr. Di Toro with the Founders Award for an outstanding career that has impacted the field of environmental science, specifically for his scientific contributions in water quality modeling.

As the first occupant of the O'Connor Chair, Dr. Di Toro intends to complete the book, *Analytical Water Quality Modeling*, which he had been collaborating on with Dr. O'Connor. His first book, *Sediment Flux Modeling*, will be published by John Wiley & Sons in spring 2000.

University of Massachusetts

Dr. Sharon Long has been promoted to Associate Professor with tenure. Her expertise is in the area of environmental microbiology. **Dr. Paula Strudevant Rees** has been hired as Assistant Professor. She received her Ph.D. degree from Princeton University and works in the area of water resources engineering.

On September 30, 1999, **Hilary I. Inyang**, EWRI/ASCE member, was re-appointed for a second two-year term as chair of the Environmental Engineering Committee of the U.S. EPA's Science Advisory Board, by U.S. EPA Administrator Ms. Carol Browner. Inyang is professor and director of the Center for Environmental Engineering, Science and Technology (CEEST) at the University of Massachusetts Lowell. He is an associate editor of ASCE's *Journal of Environmental Engineering* and associate editor/editorial board member of six other international journals including ASCE's *Journal of Infrastructure Systems*.

Professor Inyang has been an active researcher, prolific author and consultant of governments and private firms in the areas of waste containment systems, waste reuse, contaminant-soil interactions and underground space. He has won several scientific awards and was recently appointed by ASCE to the National Environmental Systems Policy Committee.

Professor Inyang was honored as concurrent professor at Nanjing University, China in a ceremony on August 27, 1999, in Nanjing, China. Nanjing University is one of P.R. China's top science and technology institutions and has produced the largest number of Chinese National Academy of Science members. The ceremony was attended by several professors from Chinese universities and technical institutes. In his acceptance speech, Prof. Inyang pledged to use cooperative research in environmental science and technology to foster development and cultural understanding between P.R. China and the United States, and to seek avenues and support for joint educational activities through international organizations.

University of Minnesota

Assistant Professor **William Arnold** joins the Department of Civil Engineering at the University of Minnesota from the Johns Hopkins University, where he received his Ph. D. in 1999. His advisor was A. Lynn Roberts. He also received a S.B. in Chemical Engineering from the Massachusetts Institute of Technology in 1994 and a M.S. in Chemical Engineering from Yale University in 1995. His dissertation, "Kinetics and pathways of chlorinated ethylene and chlorinated ethane reaction with zero-valent metals," deals with the remediation of chlorinated contaminants in groundwater. Bill was the recipient of the Graduate Student Paper Award in 1999 and a Certificate of Merit for Presentation in 1997 from the Division of Environmental Chemistry, American Chemical Society.

Associate Professor **Miki Hondzo** joins the Department of Civil Engineering at the University of Minnesota from the Purdue University School of Civil Engineering, where he was an Assistant Professor for four years. Miki received his B.S. (1983) from the University of Sarajevo, Yugoslavia, his M.S. (1988) from the Free University of Brussels, Belgium, and his Ph. D. (1992) from the University of Minnesota. His research interest is in the area of environmental fluid dynamics, emphasizing interactions among fluid flow and biological or chemical processes. He is especially concerned with the small-scale fluid motion and microstructure measurements of transport processes in lakes and rivers. Dr. Hondzo co-authored a paper with Heinz Stefan that received the Founders Award from the International Association on Water Quality as the best paper appearing in Water Research. He is also a recipient of the CAREER Award from the National Science Foundation for the field and laboratory research on "Benthic Boundary Mixing and Dissolved Oxygen Transfer at the Sediment-Water Interface in a Stratified Lake."

Assistant Professor **Fernando Porté-Agel** will be joining the Department of Civil Engineering at the University of Minnesota from the Johns Hopkins University in January 2000. His Ph.D. was completed under the advisorship of Marc Parlange. Fernando received his B.S. (1992) from the Polytechnic University of Catalonia, Spain, and his M.S. (1995) in Hydrology from the IHE-Delft, The Netherlands. His research interests are in the fields of environmental fluid mechanics and hydrology. He is especially concerned with questions regarding land-atmosphere interaction, turbulence and the atmospheric boundary layer. His research combines field experimentation, data analysis, modeling and theoretical developments. His professional interests also include vadoze zone transport processes, watershed scale hydrology and water resources engineering. Professor Porté has received awards from the Spanish Association of Civil Engineers, the Spanish Ministry of Foreign Affairs and the "La Caixa" fellowship program. Recently, he won the Outstanding Paper Award from the Hydrology Section of the American Geophysical Union.

Rice University

Herb Ward, Foyt Family Chair of Engineering and Professor of Environmental Science and Engineering at Rice University, has been re-elected Chair of the Scientific Advisory Board of the Strategic Environmental Research and Development Program (SERDP) which funds research in the areas of Cleanup, Compliance, Pollution Prevention and Conservation. New SERDP research opportunities (Statements of Need) are released for national competition each year, usually in November.

Rutgers University

Dr. Kirk R. Barrett was recently appointed Research Director of the Meadowlands Environmental Research Institute (MERI) at Rutgers University in Newark, New Jersey. The Institute, formed in 1998, is a collaboration between Rutgers' Center for Information Management, Integration and Connectivity (CIMIC) and the Hackensack Meadowlands Development Commission, the New Jersey state agency that oversees the Meadowlands. The area is a complex urban estuary with over 8,000 acres of wetlands and significant contamination from past waste disposal and industrial discharges. More information is available at MERI's web site, http://cimic.rutgers.edu/meri.

UNLV

Dr. Thomas Piechota, Ph.D. 1997, UCLA, P.E., has been hired as an assistant professor in the Department of Civil and Environmental Engineering at UNLV. He has research interests in hydrology and stormwater quality.

Dr. Jaci Batista, assistant professor, has received a $345,000 multi-year, multi-investigator grant from EPA EPSCoR as principal investigator to study extent of perchlorate contamination, fate and transport of perchlorate, and perchlorate removal processes.

As of July 1, 1999, **Dave James** has been appointed to a three-year term as chair of the Civil and Environmental Engineering Department at UNLV.

Programs & Places

Indiana University

We are looking for a few good chemistry students who want to earn a Ph. D. in Environmental Science at the School of Public and Environmental Affairs at Indiana University, Bloomington. The faculty of the school includes chemists and other scientists working in the following areas:

- Ronald Hites, Toxic organic chemicals in the environment with a focus on the transport of halogenated pollutants through the atmosphere.
- Philip Stevens, Atmospheric chemistry with a focus on the reactions of biogenic hydrocarbons.
- Jeff White, Biogeochemistry of greenhouse gases in wetland soils with a focus on the use of stable isotopes.
- Debera Backhus, Environmental organic chemistry with a focus on sorption/desorption processes affecting contaminant fate and transport.
- Flynn Picardal, Environmental microbiology, microbial transformation of metals, and biodegradation of halogenated organic compounds.
- J. C. Randolph, Ecosystem ecology with a focus on the biogeochemistry of temperate forests and their interactions with climate.
- Chris Craft, Wetland biogeochemistry with a focus on carbon cycling and plant-soil nutrient interactions.
- Dave Parkhurst, Statistical methods for analyzing environmental data.

Generous research assistantships without a teaching requirement are available. The degree requirements are flexible. For more information on the doctoral program see: http://www.indiana.edu/~speaweb/academics/phdes.html or call 1-855-2457 for additional information. You may also write to: Environmental Science Ph. D. Program, SPEA Room 441, 1315 East Tenth St., Indiana University, Bloomington, IN 47405-1701.

University of Miami

The Environmental Engineering program at the University of Miami has received ABET accreditation. The program was initiated in 1996.

Washington State University

Collaborative Graduate Study Opportunity through an NSF IGERT Program. Washington State University was recently awarded an NSF Integrative Graduate Education and Research Training (IGERT) grant that will provide a unique, multidisciplinary educational experience for selected Ph.D. candidates working in the Center for Multiphase Environmental Research. A participating student would obtain her/his degree from an associated academic program in the Colleges of Engineering (Biological Systems, Chemical, Civil and Environmental, and Mechanical), Agriculture (Crop and Soil Science), or Science (Chemistry, Geology, and Microbiology). The WSU/NSF IGERT Training Program affords students the chance to work in co-located laboratories with colleagues from other disciplines and participate in multidisciplinary research. In addition, students will participate in internships at selected industries, domestic and international research laboratories, government agencies, or Indian Nation environmental departments.

The collaborative research environment is designed around the premise that the solution to pressing environmental problems requires a better understanding of chemical, physical, and biological phenomena that occur at interfaces between various phase states and necessitates the application of this fundamental information to understand large-scale transport, ultimate fate, and bioavailability of environmentally significant constituents.

Opportunities exist for graduate students to participate in this environment, and for advanced undergraduate students to spend a summer at WSU learning about environmental research and interacting with a variety of mentors. Visit our web site (http://www.cmer.wsu.edu) to find out more about this unique opportunity, the participating faculty, and current areas of research. In addition, visitors can fill out an inquiry form that will initiate the application process. Information can also be obtained through phone (509/335-6723), fax (509/335-4806), or email (cmer@wsu.edu).

Employment Opportunities

Humboldt State University

THERMODYNAMICS AND RENEWABLE ENERGY RESOURCES. The Environmental Resources Engineering Department (www.humboldt.edu/~ere_dept) invites applications for a full time, tenure track faculty position beginning in August 2000. QUALIFICATIONS: Candidates are expected to have expertise in thermodynamics and renewable energy systems. Experience in the design, installation, and monitoring of renewable energy systems and/or national and international energy policy is desirable. A Ph.D. in environmental engineering, mechanical engineering, or a related engineering or science field, is required. Rank and salary will be commensurate with experience. DUTIES: Candidates should have a strong interest in undergraduate teaching and research. Teaching duties will include some combination of the following energy related courses: Introductory Thermodynamics, Advanced Thermodynamics, Building Energy Analysis, Renewable Energy Power Systems, and Solar Thermal Engineering, as well as other courses (such as Statics, Dynamics, etc.) in the curriculum. Opportunities also exist for participation in the Environmental Systems graduate program and for research work at the Schatz Energy Research Center. Applicants should send a curriculum vitae, transcripts of all university course work, a description of teaching and research interests, and three letters of recommendation to: Professor Peter Lehman, Search Committee Chair, Environmental Resources Engineering Department, Humboldt State University, Arcata, CA 95521-4957. All application materials must be received by January 28, 2000 to receive consideration. Candidates are welcome to utilize fax (707/826-3616) or email (pal1@axe.humboldt.edu) for communications but applications via fax or email are not acceptable.

Humboldt State University is an Equal Opportunity/ Affirmative Action/Title IX employer. The university is committed to achieving the goals of equal opportunity and affirmative action and endeavors to employ faculty of the highest quality reflecting the ethnic and cultural diversity of the state. Humboldt State University hires only individuals authorized to work in the United States.

University of New Hampshire

DEAN, COLLEGE OF ENGINEERING AND PHYSICAL SCIENCES. The University of New Hampshire invites nominations and letters of application for the position of Dean of the College of Engineering and Physical Sciences. The College is one of the University's six schools and colleges, with 1,100 undergraduate majors and 400 graduate students. Its Dean is responsible for the administration of the college's academic programs in engineering, physical sciences, and mathematics; its interdisciplinary programs; affiliated research centers; fund raising; and oversight of capital campaign projects. The Dean oversees academic programs in nine departments The college's academic and research faculty secure some $27,000,000 in external research funding annually. The full position announcement can be viewed at: http://www.unh.edu/academic-affairs/button4.html.

Nominations and letters of application should include the name, address, phone and email address of five references, and should be submitted to:
CEPS Dean's Search Committee
Office of the Provost and VP for Academic Affairs
Thompson Hall 207
University of New Hampshire
Durham, NH 03824

The Committee will begin review of applications immediately and will continue until the position is filled. Date of appointment will be no later than July 1, 2000.

UNH is strongly committed to achieving excellence through diversity. The University actively encourages applications and nominations of women, persons of color, people with disabilities, and members of other underrepresented groups.

Northwestern University

The Department of Civil Engineering at Northwestern University invites applications for a tenure-track, assistant professor position in Environmental Engineering. The position is for an outstanding engineer eager to develop a program encompassing fundamental to applied scholarship that addresses physical phenomena in a variety of media

and settings. Applicants must possess an earned doctorate in environmental, chemical, or civil engineering, or a related field. The successful candidate will thrive in and promote our highly inter-disciplinary setting, which educates graduate and undergraduate students in a wide range of environmental sciences and quantitative skills. The ideal candidate should have an established record of achievement in physical and transport processes in environmental systems. Work experience in engineering is desirable. The capacity to develop an externally funded research program—individually and in concert with other faculty—is essential.

Northwestern's Environmental Engineering program is comprised of 9 faculty who emphasize environmental microbiology and chemistry directed towards natural and engineered aquatic systems. This position expands our faculty to enhance our strength in physical and transport processes.

Northwestern University is an Affirmative Action/ Equal Opportunity employer. Applications from women and under-represented minorities are encouraged. Hiring is contingent upon eligibility to work in the United States of America. The position is available September 1, 2000. A letter describing research and teaching interests, an academic résumé, and the name and contact information for at least three professional references should reach the search committee by January 14, 2000 to ensure consideration, but the search will continue until a suitable candidate is hired. Application materials should be sent to: Dr. Bruce E. Rittmann, Environmental Engineer Search Committee, Department of Civil Engineering, Northwestern University, 2145 Sheridan Road, Evanston, IL 60208-3109, U.S.A. Further information can be found at http://www.civil.nwu.edu/ehe.

San Diego State University

FACULTY POSITION IN ENVIRONMENTAL ENGINEERING. The Department of Civil and Environmental Engineering (CEE) at San Diego State University (SDSU) invites applications for a tenure-track position at the Assistant or Associate Professor levels in water quality engineering.

The applicant must hold a Ph.D in Environmental, Civil or Chemical Engineering. A strong background in physicochemical and/or biological processes with major personal laboratory experience is required. The new faculty member will be responsible for teaching undergraduate and graduate courses in environmental engineering, and development of an externally funded research program of high quality and distinction. The successful candidate is expected to have full commitment to academic and scholarly pursuits, and willing to participate in service activities to enhance the recognition of the existing programs in Environmental Engineering. Experience as a post-doc research associate with major contribution will be preferred. PE registration or significant progress toward it is desirable.

The Department of CEE at SDSU offers a new B.S. degree in Environmental Engineering, B.S. and M.S. degrees in Civil Engineering with emphasis in Environmental Engineering, and a Ph.D degree in Applied Mechanics/ Environmental Engineering joint with the University of California at San Diego. The successful candidate will complement the existing strength in environmental process engineering. Further information about the department can be accessed at http://kahuna.sdsu.edu/engineering/civil/.

The position is available in August 2000. Applicants should send a detailed curriculum vita, a statement of career objectives and research vision, including proposed research programs, copies of up to three publications, and names and addresses of three references to: Mirat D. Gurol, Search Committee Chair, Department of Civil and Environmental Engineering, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-1324.

The screening of applicants will start on February 7 and continue until the position is filled. For further information, contact cnafey@mail.sdsu.edu. The SDSU is an Equal Opportunity, Affirmative Action Employer.

State University of New York

The Department of Civil, Structural and Environmental Engineering at SUNY-Buffalo invites faculty applications in environmental engineering for the Spring 2000 semester. Applicants who expect to be available for the Fall 2000 semester also are encouraged to apply. Eligible candidates must have a strong background in environmental engineering. The successful candidate also must have demonstrated expertise in a field outside environmental engineering. Examples include: smart environmental systems (e.g., information science, remote sensing, process control), computing (computer science, GIS), applied sciences (microbiology, toxicology, limnology, trace analysis), and risk assessment. The successful candidate is expected to develop a nationally recognized funded research program and contribute to both graduate and undergraduate teaching. Applicants must have a Ph.D. and possess or be eligible for professional licensure. Salary and related incentives will be commensurate with the qualifications of the applicant.

The Department of Civil, Structural and Environmental Engineering currently has 24 faculty members, 160 graduate students, 100 juniors and seniors, and approximately $2.5 million in annual research expenditures. The department is host to two multidisciplinary research centers in environmental engineering: the Center for Integrated Waste Management and the Great Lakes Program. Environmental Engineering faculty regularly interact with the newly

established Center for Computational Research (one of the top 10 academic supercomputing centers in the United States) and the NSF-sponsored National Center for Geographic Information Analysis.

Interested candidates should submit a letter of application, a current comprehensive vita, copies of up to three of their most significant publications, and three reference letters to: A. Scott Weber, Search Committee Chair, 207 Jarvis Hall, Department of Civil, Structural and Environmental Engineering, State University of New York at Buffalo, Buffalo, NY 14260-4300, e-mail: sweber@eng.buffalo.edu

Applicants are encouraged to apply before December 1, 1999, but applications will continue to be reviewed until the position is filled.

The State University of New York at Buffalo is an Equal Opportunity/Affirmative Action Employer. SUNY at Buffalo encourages women and ethnic minorities to apply and to so identify themselves. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration and Control Act of 1986).

University of Western Ontario

FACULTY OF ENGINEERING SCIENCE, THE SALAMANDER CHAIR IN ENVIRONMENTAL ENGINEERING. As part of the expansion of the established environmental engineering research in both the Department of Chemical and Biochemical Engineering and the Department of Civil and Environmental Engineering, applications are invited for the new Salamander Chair in Environmental Engineering.

A self-starter with initiative, the successful applicant will be a graduate of either an environmental, civil or chemical engineering program, will have completed a Ph.D., and will have the appropriate relevant experience necessary to collaborate with researchers in environmental engineering in both departments, teach common core courses taken by students in the environmental engineering options in both chemical and civil engineering at The University of Western Ontario, and to supervise final year undergraduate design projects related to this area.

Applicants must have a proven research record, excellent communication and teaching skills, an indicated ability to work closely with industry, and be eligible for registration as a professional engineer in Ontario. The past teaching and/or professional engineering experience will be an important consideration in the selection of the successful candidate.

The Chair in Environmental Engineering will be a term Chair for five years. The appointment will be at either the Professor or Associate Professor level. An appointment at the Associate Professor level will be either limited term or probationary while an appointment at the Professor level will be tenured.

The successful applicant will be expected to work with both established and new researchers with the objective of coordinating related activities and looking for opportunities for collaborative research. The individual will also be expected to initiate and conduct a vigorous research program (in collaboration with others, where appropriate), supervise graduate students in areas of common interest between the two departments, and participate in other educational and professional activities.

This will be a joint appointment between the two departments and the appointee will be an equal member of both departments. Undergraduate and graduate teaching responsibilities will be for courses taken by students from both departments.

If you share our commitment to excellence in teaching and research and are eager to pursue a rewarding academic career, please forward your curriculum vitae, a statement of how you would contribute and provide leadership, and the names of three referees to:
Dr. I.D. Moore, Acting Dean, Faculty of Engineering Science
The University of Western Ontario
London, Ontario, Canada N6A 5B9
Tel: (519) 661-2128; FAX: (519) 661-3808

Additional information may be gained from either:
Dr. R.K. Rowe, P.Eng., Chair, Department of Civil and Environmental Engineering; Tel: (519) 661-2139; FAX: (519) 661-3779; Email: krowe@eng.uwo.ca, OR
Dr. S. Rohani, P.Eng., Chair, Department of Chemical and Biochemical Engineering; Tel: (519) 661-4116; FAX: (519) 661-3498; Email: rohani@eng.uwo.ca.

Applications close March 1, 2000 for an appointment date of July 1, 2000 (or as soon as possible thereafter). Salary and rank will be commensurate with experience and research record. The position is subject to budget approval. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens, and permanent residents of Canada. The University of Western Ontario is committed to employment equity, welcomes diversity in the workplace, and encourages applications from all qualified individuals including women, members of visible minorities, aboriginal persons and persons with disabilities.

Fundamentals of Air Quality Systems: Design of Air Pollution Control Devices

Kenneth E. Noll, American Academy of Environmental Engineers, Annapolis, MD, 1999

In 1972 Al Rimer and I were asked (read coerced) by Dan Okun to take the written test by the fledgling American Academy of Environmental Engineers. I chose to do the general environmental exam which included water, air, solid waste, and sanitation. I remember one of the questions from that exam:

A three bedroom house with a septic tank needs how many feet of tile field?

_____ a. 340 feet
_____ b. 350 feet
_____ c. 360 feet
_____ d. 370 feet

Oh OK, so maybe I exaggerate. But it was something like that. Somehow I passed the test and become a diplomate.

A lot has changed with the Academy since that time. For one, the test is much improved and actually does measure one's capabilities as an environmental engineer. The interview process is also much better. (Our interview consisted of Dan Okun calling us to make sure we had taken the test.) In fact, sitting as an interviewer a few months ago I was appalled that a professor/applicant told us that he did not believe it was his responsibility to teach professional ethics in a senior design course. I shudda not passed him.

One of the things that has changed with the Academy during the last three decades has been the development of their *Environmental Engineering Bookstore*. They have collected books from all over the world and sell them as a service to the profession. Although they have also published a few books themselves, none have been of the quality and usefulness (to us) of the excellent air pollution design book by Ken Noll.

After the requisite introduction, the book covers some basic concepts of gases (all them laws), the motion of particles, efficiencies of control, cyclones, fabric filters, wet scrubbers, electrostatic precipitators, control of volatile organic compounds, adsorption, incineration (should that not be combustion?), absorption, control of emissions from motor vehicles, and air quality systems for complex industrial facilities.

What I like most about this book are the problems. They are both interesting and right down the throat. Many start out with the operative word "design," but the problems are not just regurgitation of the text material. For example, in the chapter on scrubbers, one problem involves the efficiency of a single raindrop. Neat.

The book also contains an appendix of typical questions used in the Professional Engineering Examination for Environmental Engineers. This would be useful for anyone contemplating this examination.

For all of us who are occasionally asked to teach a general environmental engineering course, this book would provide excellent background material and imaginative homework problems. If this book is an example of AAEE's foray into the textbook field, we hope there will be many more books to come.

Kenneth Noll is a professor of environmental engineering at the Illinois Institute of Technology.

Optimizing Reservoir Resources

Charles ReVelle, John Wiley & Sons, New York, 1999

All my life I have been searching for a surrogate to determine whether or not I would get along with someone. It takes too blasted long to find that someone is indeed a shmuck and you don't want to spend any more time with him or her. All the time spent finding this out is wasted. Should there not be one telling characteristic that would expedite the process of developing friendships?

After a lot of empirical evaluation, I have concluded that there indeed may be such an instrument. It is the messiness of offices. More often than not, I find that I really like people who live in documentary squalor.

Take, for example, Curt Marais of the University of Cape Town in South Africa. In 1968, Curt was on sabbatical leave at UNC and I had the good fortune to get to know him. Not only is he brilliant, but he is also a genuinely nice person and I treasure the times we spent together.

But the office Curt occupied downstairs from my office was unbelievable. He had piled papers on his desk to the point that the papers achieved an angle of repose. If you put one more sheet of paper on the pile it would slide off onto the floor. Curt smoked cigarettes and invariably lost his ashtrays under the paper, so he would rest his cigarettes on the edge of the desk right next to the potential pier of paper. The first time I

saw him do that I went right to the Xerox machine and photocopied all of my experimental data and took the copies home with me. I was absolutely sure the place would burn down.

[The conclusion of liking people with messy offices has one downside, however. I tend personally to be comfortable only if everything in my own office is put away in its rightful place and the book shelf is arranged alphabetically. I wonder if this is the reason I never get any valentines?]

Another messy person is Chuck ReVelle, who I recently visited at Johns Hopkins (oops, sorry, THE Johns Hopkins) and it took me two hours to find my way back out of his office. But my conclusion about messy people was again confirmed.

Chuck has written a really neat book on reservoirs, the result of significant individual effort and reflection and in response to a question asked by the Institute of Water Resources of the U. S. Corps of Engineers who do indeed need to know something about optimizing reservoir resources. In many ways, the book reminds me of the venerable classic open channel book by Ven Te Chow. Both books start with the simplest cases and build the complexity to increasingly realistic examples. This book starts with the single reservoir, with the objective function to minimize cost of the reservoir's capacity to store water. As Chuck points out, this would work just as well for a bathtub. But then the problem becomes increasingly complex, with multiple reservoirs, addition of the hydroelectric function, cost allocation strategies, and integrated reservoir services. The concept of reliability is introduced which greatly complicates the allocation but also brings the theory to real life. Fortunately, most of the calculations use linear programming techniques, and this makes the book usable for even undergraduate classes. Even the stochastic models introduced in the second section of the book reduce to linear programming models.

I believe this book will become the new standard for water resources courses devoted to optimizing resources. Not bad for a messy person.

Charles ReVelle is a professor in the Department of Geography and Environmental Engineering at The Johns Hopkins University.

Strategies of Industrial and Hazardous Waste Management

Nelson L. Nemerow and Frank I. Agardy, Van Nostrand Reinhold, New York, 1998

My Dad used to reflect that there are two ways you can tell if you are getting old:

1. Your memory goes
2. .....

I can never remember the second one.

In any academic discipline, the second way of telling when you are getting old is that you stop reading the literature and cease to appreciate the good work done by the newer generations. I thought about growing old when I was reading this book by two lions in our field, Nelson Nemerow and Frank Agardy.

Their book is divided into four sections. Part I covers basic knowledge and practice such as stream sanitation. Part II is titled "Theories," but there is precious little of that in the text. Part III is applications and covers such topics as joint treatment of industrial and domestic waste, discharge of totally and partially treated industrial waste, land application, hazardous materials, and a few case studies. Part IV is a listing of major industrial wastes [all too familiar from the previous Nemerow books].

Although there are some new chapters of worth, such as the one on heavy metal contamination of soils and groundwater, the rest of the book appears to be a reprint of previously published material. As proof, look at the references for any of the chapters in Part II, Theory. In the chapter on sludge disposal, the most recent reference is dated 1967(!) and many are from the 1930s.

There are other problems with this book. The questions at the end of the chapters are supposed to be for students but these are simply inane and demeaning. There are no numerical problems. Sometimes the writing is paternalistic and inappropriate for students, and sometimes the language is wrong. For example, Chapter 18 is entitled "Discharge of Completely Treated Waste to Municipal Sewer Systems." It's SEWERAGE systems, as all of us have been taught.

I have to say that, unfortunately, Nelson Nemerow and Frank Agardy are two old men who have repackaged some ancient material under new covers. This is not a book to buy.

Nelson Nemerow is now a retired environmental engineer and Frank Agardy is the president of Forensic Management Associates, Inc.

Format for *Newsletter* submissions...

Please note that the preferred file formats for electronic newsletter submissions are MS Word format for text (.doc) and tif format for photos (.tif). Photos should be scanned at 300 dpi resolution. Please identify and provide names of all subjects in photographs. Submissions should be sent to Roger Ely, Newsletter Editor, roger.ely@yale.edu.

Briefly Noted:

Environmental, Safety, and Health Engineering

Gayle Woodside and Dianna Kocurek, John Wiley & Sons, New York, 1997

This book begins right off with a wrong premise, which I suppose the authors sold to Wiley. They state that "this book merges the three disciplines [environmental, safety and health engineers]. We feel that although this book is a 'first' of its kind, it is certainly one that is long overdue."

How could they say such a thing? Have they never heard of "Public Safety Engineering" by Phelps? or the classic by Ehlers? or the sequel by Ehlers and Steele? or the tome by Salvato? or the excellent book by Emil Chanlett?

Oh OK, they started out on the wrong foot. But did they achieve such "merging" and is this a useful book for our profession?

Unfortunately, the answer is NO. For one thing, the authors approach the field from the philosophical standpoint that whatever is the law or is in the Federal Register is the truth. The very first two chapters are all about the EPA and OSHA. Do as Big Brother sez and you cannot go wrong. Maybe this approach is good for community colleges that train safety inspectors, but it is pretty much worthless for universities. [Unless of course you teach your students how to design proper labels for non-hazardous waste and what fireman's boots look like. I kid you not!]

A redeeming aspect of this book is a really neat chapter on statistical applications. This may be worthwhile for beginning engineers who have not had statistical training, but this chapter is not enough for you to go out and buy the book.

Gayle Woodside is Manager of Environmental Engineering for IBM in Austin, Texas, and Dianna Kocurek is with the engineering firm of Tischler/Kocurek.

Bioremediation Engineering for Mining and Mineral Processing Wastes

Nupur Sengupta, Northwest Academic Publishing, Seattle [301 Union Street, Seattle, WA 98111-1245], 1997

This book offers a thorough literature review of bioremediation of metal-laden waste. It is short on theory and is of little educational value, but would be useful to anyone doing remediation work with metals. It is never wrong to find out how other fields, in this case our brothers the mining engineers, approach the problem of metal contamination.

The best chapter in the book is, in my opinion, the discussion of acid mine drainage. If you have to know something about this problem, you could well benefit from reading Sengupta's excellent explanation. You can contact this small publisher by e-mail at academic@iswnet.com.

Nupur Sengupta is a mining engineer with a Ph.D. in mining engineering from the Colorado School of Mines.

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AEESP Members,

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

Conferences / Calls for Papers

Call for Papers:
Chemical-Biological Interactions in Contaminant Fate
220th American Chemical Society National Meeting
Washington, DC
August 20-25, 2000

Division of Environmental Chemistry (Sponsor)
Division of Geochemistry (Co-Sponsor)
The fate of contaminants in geological environments is determined by complex interactions between chemical and biological processes. A full understanding of these interactions requires a genuinely interdisciplinary perspective, which makes research in this area a continuing challenge. This symposium will address recent progress on topics that are joined by this theme, such as (i) mobilization and immobilization of metals by dissimilatory reduction, (ii) mediation of redox reactions by natural organic matter, (iii) coupled/competing biotic and abiotic dechlorination processes, and (iv) fate and effects of extracellular enzymes, cofactors, and chelators.

Short abstracts (required by ACS) and extended abstracts no longer than 4 pages (required by the Division of Environmental Chemistry) must be submitted by 7 April 2000 to one of the organizers below:

- Paul Tratnyek, Oregon Graduate Institute, 20000 NW Walker Rd., Beaverton, OR 97006-8921, 503-690-1023, Fax: 503-690-1273, tratnyek@ese.ogi.edu.
- Peter Adriaens, University of Michigan, 1352 Beal Street, Ann Arbor, MI 48109-2125, 734-763-1464, Fax: 734-763-2275, adriaens@engin.umich.edu.
- Eric Roden, University of Alabama, Bevill Building, 7th Ave., Tuscaloosa, AL 35487-0206, 205-348-0556, Fax: 205-348-1403, eroden@biology.as.ua.edu.

Web site: http://www.ese.ogi.edu/tratnyek/chembio/

Call for Papers:
32nd Mid-Atlantic Industrial and Hazardous Waste Conference
Rensselaer Polytechnic Institute, Troy, New York
June 26-28, 2000

The Mid-Atlantic Industrial and Hazardous Waste Conference is an annual meeting of environmental professionals from academia, government and industry. Recent developments in research, regulation, and engineering practice are exchanged through platform, oral, and poster presentations. Platform and oral presentations are eligible for publication in the Conference Proceedings.

Rensselaer Polytechnic Institute will host the 32nd Mid-Atlantic Industrial and Hazardous Waste Conference. The conference is organized jointly by the Departments of Environmental and Energy Engineering and Civil Engineering.

The Mid-Atlantic conference is unique in its efforts to foster communication across professional sectors and disciplines, providing a forum for all aspects of hazardous and industrial waste research, technology development, demonstration, evaluation and policy development.

Papers are sought that address the following areas:

- Biological and biochemical processes for industrial waste pretreatment, remediation of soil, sediments, groundwater, and gas-phase pollutants, and natural attenuation;
- Physicochemical processes for remediation of soil, sediments, groundwater, and gas-phase pollutants;
- In-situ remediation of soil, sediments, and groundwater, including novel in-situ technologies;
- Landfill design and operation;
- Pollution prevention, waste minimization, industrial ecology, and sustainability;
- Fate and transport of hazardous pollutants in groundwater and surface water;
- Risk analysis and risk-based clean-up;
- Site characterization, modeling and monitoring;
- Brownfield redevelopment and financing;
- Regulatory issues.

Submission of Abstracts:
Prospective contributors are invited to submit 3 copies of a 300-word abstract by January 15, 2000. Authors should indicate whether an oral presentation or poster presentation is preferred. The abstract should reflect work that is nearing completion, rather than proposed work. Papers describing fundamental and applied studies at the bench-, pilot- and full

scale are encouraged. Abstracts should include the title, author name(s), affiliations(s), and the regular mailing address and e-mail address of the corresponding author.

Papers will be selected based on technical content, originality, and relevance to the conference topics. Authors of selected papers will be sent instructions for the submission of full manuscripts for publication in the Conference Proceedings.

Abstract should be sent to:
Rensselaer Polytechnic Institute
Department of Environmental and Energy Engineering
110 8th Street
Troy, NY 12180
ATTN: Pamela Zepf

Location:
The conference will be held on the campus of Rensselaer Polytechnic Institute in Troy, New York. Rensselaer's historic campus sits on a bluff overlooking the city of Troy and the Hudson River. Troy is 10 miles northeast of Albany, New York's capital, and 150 miles north of New York City. The area is centrally located with easy access to Boston (3 hrs), Montreal (4 hrs), Syracuse (2 hrs) and Niagara Falls (5 hrs). Troy and the Capital Region (population 870,000) offer a wealth of recreational and cultural activities, including nearby Lake George, hiking and mountain climbing in the Catskills, Adirondacks, and the Green Mountains of Vermont, and cultural events offered at the Saratoga Performing Arts Center (SPAC), and the easily accessible Berkshires.

Lodging:
Conference lodging will be available on the RPI campus in air-conditioned residence halls. Single and double occupancy lodging will be available. In addition, several hotels are within walking distance to campus, and many more are available within a short drive.

Consortium Universities:
The Mid-Atlantic Industrial and Hazardous Waste Conference is sponsored by a consortium of universities: Bucknell University, Carnegie Mellon University, University of Cincinnati, University of Connecticut, University of Delaware, Drexel University, Howard University, Johns Hopkins University, Lehigh University, University of Maryland, University of Massachusetts, Massachusetts Institute of Technology, Penn State University, University of Pittsburgh, Rensselaer Polytechnic Institute, University of Rhode Island, Rutgers, the State University of New Jersey, Syracuse University, SUNY Buffalo, Stevens Institute of Technology, West Virginia University, Villanova University, Virginia Polytechnic and State University, Yale University

2000 Gordon Research Conference
on Modeling Fluid Flow in Permeable Media
Proctor Academy, Andover, New Hampshire
August 6-11, 2000

The Gordon Research Conference on Modeling Fluid Flow in Permeable Media is a bi-annual conference focusing on the latest research on flow and transport in porous media. The conference provides a stimulating and relaxed forum for the interdisciplinary exchange of ideas. Participants typically include hydrologists, chemical and petroleum engineers, environmental engineers, soil scientists, geologists, mathematicians, and physicists. In the spirit of the Gordon Conferences, the format is designed to encourage in-depth discussion, with a program of morning and evening invited lectures and open discussions. Free afternoons and evening social gatherings provide ample time for more informal interactions. Poster sessions typically form an important part of the meeting.

For additional information about this Gordon Conference, please visit our web site at http://www.-personal.engin.umich.edu/~abriola/gordon/Gordon.html. The web site has an on-line application form and instructions for the submission of abstracts for poster presentations. You may also contact the Conference Chair, Linda M. Abriola, Environmental and Water Resources Engineering, The University of Michigan, Ann Arbor, MI 48109-2125; Phone: (734) 763-1464; e-mail: Gordon.Conference@umich.edu; or other members of the Organizing Committee: Kishore Mohanty (Vice-Chair), mohanty@uh.edu; Martin Blunt, m.blunt@ic.ac.uk; Peter Grathwohl, peter.grathwohl@uni-tuebingen.de; Charles Harvey, charvey@mit.edu; S. Majid Hassanizadeh, majid@ct.tudelft.nl, Rosemary Knight, knight@geop.ubc.ca; Phil Ringrose, phiri@statoil.no; Rien van Genuchten, rvang@ussl.ars.usda.gov; Olga Vizika, olga.vizika-kavvadias@ifp.fr.

AEESP membership applications available online

The AEESP membership application form is available online by accessing "Membership Information" at http://www.aeesp.org and going to "Membership Information."

Biosolids Management in the 21st Century

A Workshop sponsored by the National Science Foundation
College Park, Maryland
April 10-11, 2000

Ultimate disposal of biosolids from municipal wastewater treatment remains a dilemma after many years of research, study, and practice. This workshop has been assembled to discuss past practices, current experiences, upcoming issues, and ultimately future research needs in biosolids management. Limited space is available for workshop attendance and participation. For more information, see http://www.cee.umd.edu/event/BM/BM.htm or contact Oliver J. Hao at the University of Maryland, ohj1@eng.umd.edu.

45th Annual Institute in Water Pollution Control

Manhattan College, Riverdale, New York
June 5-9, 2000

Manhattan College's forty-fourth Annual Institute in Water Pollution Control will take place on June 5-9, 2000, at the Manhattan College in Riverdale, New York. Two courses, which run concurrently, will be offered:

- Water Quality Modeling
- Treatment of Municipal, Hazardous and Toxic Wastewaters

These week-long courses have much to offer young engineers and seasoned professionals who have not been able to stay abreast of the rapidly changing field. Set in a classroom atmosphere, the courses allow for dialog between lecturer and participants. The fee per course is $1,200 and includes a set of notes for each attendee. For a brochure or additional information, contact: Ms. Florence Byrne, Program Coordinator, Manhattan College, Environmental Engineering Department, Riverdale, NY 10471; phone (718) 862-7277; FAX (718) 862-8018; e-mail JJeris@Manhattan.Edu.

Health Effects of Drinking Water

The Hotel Roanoke & Conference Center, Roanoke, Virginia
April 16-18, 2000

- What contaminants should we be concerned about?
- At what levels do the contaminants cause short and/or long term health effects? What are the health effects?
- What are the associated risks?
- What are the current regulations and what regulations are on the horizon?

The goal of this symposium is to provide a forum for sharing answers and perspectives related to the above questions. Over the course of three days, nine experts will present current information about the health effects of various organic and inorganic chemicals, and waterborne pathogens. For more information, contact Dr. Gregory Boardman, Department of Civil and Environmental Engineering, Virginia Tech at (540) 231-2013 or gboard@vt.edu.

Executive Training for Water & Wastewater Managers & Administrators

The Hotel Roanoke & Conference Center, Roanoke, Virginia
July 23-28, 2000

This new Executive Training Program for Water and Wastewater Managers and Administrators consists of three parts:

- Skills: computer use and applications, safety concerns and procedures, benchmarking, effective communication
- Leadership: behavioral science, psychology of safety, accountability, responsibility, team building, metrics of success, management theories
- Follow-up session: participants will be asked to return to report on personal performance and progress

These topics were selected based on the results of focus group meetings with managers and administrators who work as plant supervisors, public works directors, educators, regulatory engineers, and consulting engineers. Computer use and safety surfaced as key issues for managers and administrators. All technical applications and aspects of the program are focused on the water and wastewater industry. For more information, contact Dr. Gregory Boardman, Department of Civil and Environmental Engineering, Virginia Tech at (540) 231-2013 or gboard@vt.edu.

2000 ASCE-EWRI Environmental & Water Resources Engineering Student Paper Competition

COMPLETE COMPETITION GUIDELINES

ELIGIBILITY: Any member of an ASCE Student Chapter is eligible. Any student paper that has not won a prize in any previous competition may be entered. Papers must be completed with minimal faculty involvement. There are two categories: graduate or undergraduate student categories. Previous winners in the undergraduate category may enter only in the graduate category. Previous grand prize winners are not eligible for future competitions. A maximum of four papers from each ASCE Student Chapter will be allowed. Any subject matter related in technical aspect to environmental and water resources engineering will be accepted, including laboratory, field studies or summaries of thesis research.

FORMAT: Papers are expected to be 6-8 (8.5" by 11") pages, single sided, single spaced, 12 point font, word-processed, including all figures, tables, and a one-half page abstract. Any deviation from format or length will be subject to penalty. Do not place your name or school affiliation anywhere on the paper itself.

JUDGES: Judging will be performed by members of the ASCE-EWRI Student Activities Council and other professionals. They represent academia, government and industry. The following criteria will be followed.

Material - technical or theoretical content correctness [35%]
Demonstrated Knowledge and Understanding of Subject - depth of knowledge [20%]
Originality - topic and discussion new and not a repeat of the old and familiar [25%]
Presentation - neatness, style, organization [10%]
Clarity and readability [10%]

SUBMITTAL: An electronic copy of the paper must be received by close of business on 3/3/00 (MS Word or WordPerfect format). DO NOT INCLUDE AUTHOR'S NAME OR AFFILIATION ON ANY PAGE OF THE PAPER. Send the electronic copy to leonard@cee.uah.edu. In addition, a paper copy of the entry form signed by the entrant and Chapter Advisor must be received by 3/3/00. Send the entry form to Dr. Kathleen Leonard, Civil Engineering Dept, UAH, Huntsville, AL 35899.

AWARDS: The Committee anticipates that the awards will be similar to last year's Competition. A grand prize of $1,000 may be awarded to the best overall paper. Additional cash prizes in each category (Graduate/Undergraduate) could be awarded as follows (depending on funding):

Two Prizes	$500
Two Prizes	$250
Two Prizes	$125

Awards for winning papers and student presentations will be at the ASCE National Conference "Convergence 2000" in Kansas City, MO, in July 2000. Papers selected for presentation will be eligible for publication in the Conference Proceedings and will be considered for publication in Civil Engineering Magazine. Winners may receive a travel subsidy to attend the ASCE Conference; however, Student Chapter Advisors are encouraged to solicit local Chapters for travel subsidies. All participants will receive certificates

ADDITIONAL INFORMATION:
Inquiries regarding this competition may be addressed to Dr. Kathleen Leonard, (email leonard@cee.uah.edu or ph: 256-890-6423). Conference information can be found at www.asce.org/conferences/convergence.

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Association of Environmental Engineering and Science Professors Newsletter
Roger L. Ely, Editor
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Please send submissions and comments to the editor. To estimate the amount of lead time needed for your announcement, please note that members receive the newsletter 6-8 weeks after the submissions deadline.

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