



Association of
Environmental
Engineering
Professors

Newsletter

VOLUME 27, NO. 3

Published three times yearly by AEEP

January 1993

PRESIDENT'S CORNER

What is "Environmental Engineering?" There are probably as many definitions as there are environmental engineers. When the Association was first created in 1963, it was known as the American Association of Professors in Sanitary Engineering (AAPSE). At that time, the field of sanitary engineering was generally defined to include water supply and treatment; sewerage and sewage treatment; surface and groundwater pollution control; general environmental sanitation; control of atmospheric pollution; industrial hygiene; and radiological health. This sounds much like a description of environmental engineering today.

However, in the early 1960's several groups began to split off to form new professional specialties. Among these were water resources engineers, air resources engineers and public health engineers. In the minds of many, the sanitary engineer was relegated responsibility for management of water and wastewater.

Membership in AAPSE largely followed this trend. The vast majority of its members were faculty whose main concern was treatment of water and wastewater. There were some exceptions, but by and large, faculty interested in other environmental fields joined other organizations.

In the early 1970's, AAPSE changed its name to the Association of Environmental Engineering Professors (AEEP) to reflect the broad spectrum of backgrounds needed to address environmental problems. However, in 1992 the membership is still composed primarily of those interested in water and wastewater problems. There are some members who are principally interested in air pollution, groundwater pollution, solid waste management, or geoenvironmental engineering, but their numbers are small. It is my feeling that we must expand the scope of AEEP to encompass the interests of all faculty within the field of environmental engineering. Without this cross-linking, we will be missing a valuable component necessary to educate our students concerning integrated approaches to environmental management. Consequently, I plan to create a task force to investigate ways to encourage our colleagues who are not currently members of AEEP to join.

In a similar vein, we must do some crystal-balling to see what the outlook is for environmental engineering in the future. We will always have plenty of municipal wastewaters to treat and we will also need to develop better ways to supply high quality drinking water, but there are new arenas opening up to us if we are prepared. The latest buzz words from USEPA are "pollution prevention." EPA, under a mandate from Congress, is pushing for the elimination

of end-of-pipe industrial waste treatment by encouraging the prevention of wastes at the source. This can be achieved in a myriad of ways, including process chemical substitution, process equipment changes, recycling or reuse of waste materials, etc. Much of this work will be done by chemical engineers, materials scientists or industrial engineers, but it will still be up to the environmental engineer to evaluate the need for and effectiveness of these process changes. In addition, it will be the environmental engineering faculty's responsibility to educate these other engineering professions as to the benefits of pollution prevention. We, as a group, must decide how to meet this challenge and how to interface with these various professions who currently have little knowledge of environmental issues.

Several AEEP members have expressed nervousness about broadening the scope of AEEP too far and diluting our efforts. I agree that we need to concentrate on what we do best, but that does not mean that we can not have a broad appeal.

This coming year will see many other developments for AEEP. Work is continuing on the AEEP Long Range Plan, under the leadership of Aarne Vesilind, and should be completed this year. Steve Randtke is leading the development of a much needed AEEP Policy Manual. The Seventh Edition of the "Register of Environmental Engineering Graduate Programs," compiled by Gary Amy and Robbin Collins, will be available soon. A group headed by Joe Malina is exploring the creation of a Specialty Group on Environmental Engineering Education within the International Association on Water Quality to interface AEEP activities with our fellow faculty in Europe and Asia. An informal liaison arrangement, headed up by Bob Baillod, has been initiated with the University Consortium on Water Resources (UCOWR) to help promote governmental support for university-based environmental and water related instructional and research programs. After many years of disagreements, the Executive Committees of AEEP and the American Academy of Environmental Engineers (AAEE) have agreed to meet in January in an attempt to work out our differences. I will report to you on this in the next Newsletter. Finally, preparations are under way for our next Research Needs Workshop to be held in September in Ann Arbor, MI.

All in all, this will be a very busy year for your Association. We will need all the help we can get. If you would like to volunteer for any AEEP activity, please drop me a line.

Paul L. Bishop, President

AEEP NEWS AND ANNOUNCEMENTS

Sponsorship of 1992 AEEP Distinguished Lecturer: Dr. Saburo Matsui

Dr. Saburo Matsui of the Laboratory for Control of Environmental Micropollutants, Kyoto University, Kyoto, Japan has accepted the invitation to serve as the AEEP Distinguished Lecturer for 1993. Dr. Matsui has agreed to prepare three lectures entitled; (a) "Detection and Evaluation of DNA Damaging Micropollutants in the Water Environment by *Bacillus subtilis*," (b) "Role of Sulfur Bacteria in Aerobic and Anaerobic Biological Waste Treatment," (c) "Historical Perspective of Industrial Pollution Control in Japan." The lecture tour will be arranged during the period of March 26 to April 14, 1993 at a projected number of 10 to 12 locations.

Institutions interested in hosting Dr. Matsui should send a letter request with appropriate documentation to:

E. Joe Middlebrooks
Dept. of Civil Engineering/258
University of Nevada-Reno
Reno, Nevada 89557-0122
Tele: 702/784-1325

This request should include the following information:

1. Name and address of host institution and contact person.
2. Identity of possible co-sponsors.
3. Arrangements for publicity, accommodations and possible video taping of the lecture.
4. A brief statement describing how a visit by Dr. Matsui 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 AEEP 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 a Distinguished Lecturer within the last year or two, the research and teaching focus at the candidate institutions, and the possibility of having more than one institution co-host the event.

The members of the AEEP 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.

AEEP Spurs Success of International Conference

By all standards, the 1992 Biennial International Conference of the International Association on Water Quality (IAWQ) was a grand success, and the efforts of AEEP and its members were among the key reasons for the success. Held in May in Washington, DC, the IAWQ International Conference attracted 1,150 paid registrants, including more than 600 foreign delegates. The technical and social programs received accolades for their quality, and the conference was a financial success for its USA Organizing Committee.

AEEP members took many of the key roles in organizing the conference. Key examples include:

- the Conference Presidents, Wesley Eckenfelder and Richard Engelbrecht
- the chairman of the conference organizing committee, James Patterson
- the secretary of the organizing committee, Roger Minear
- the chairman of local arrangements, Clifford Randall
- AEEP also contributed directly through a \$2,000 contribution over 4 years
- organizing an academics reception (with financial assistance from Lewis Publishers)
- organizing graduate student workers for the conference. This last item is particularly important, because it made the conference financially viable, and it allowed 143 graduate students to attend the international conference. Special recognition should go to Mark Benjamin, who managed student recruitment for AEEP.

One of the results of the IAWQ conference and AEEP's role is a proposal that IAWQ establish a specialists group on environmental engineering education. This group is a start towards extending the concepts and benefits of AEEP to the international academic community. Thus, AEEP also is contributing as a role model.

Bruce E. Rittmann

AEEP Founders' Award

Perry L. McCarty, Silas H. Palmer Professor of Civil Engineering at Stanford University was awarded the 1992 AEEP Founders' Award at the Annual Meeting held on September 21, 1992 in New Orleans. This award is given annually to recognize an AEEP member who has made "sustained and outstanding contributions to environmental engineering education." The 1991 award was presented to Professor E. Robert Baumann of Iowa State University.

Nominations are being sought for the 1993 AEEP Founders' Award. Nominations may be made by communicating (orally or in writing) the name of the nominee to the chair of the awards committee, Amit Amirtharajah, School of Civil Engineering, Georgia Institute of Technology, Atlanta, GA 30332, Tele. (303) 492-6274, FAX (303) 492-7317. The deadline for nominations to be assured of receiving full consideration is March 15, 1993.

1993 James M. Montgomery Master's Thesis Awards

Entries are sought for the 1993 James M. Montgomery Master's Thesis Awards. First and second place awards will be given, each consisting of a plaque and a cash prize for both the student and the faculty advisor. The cash prize for the first place award is \$600 for the student and \$300 for the faculty advisor; the amounts for the second place award are \$400 and \$200, respectively.

Faculty advisors wishing to compete should send three copies of the thesis to Ryan Dupont, Utah Water Research Lab, Utah State University, UMC-8200, Logan, UT 84322-8200. They should be accompanied by a simple letter of transmittal stating the student's current address and indicating when the thesis was completed. The copies will not be returned, so inexpensive xerographic copies are recommended.

The deadline for submission is March 15, 1993 for dissertations completed during the 1992 calendar year. Faculty advisors are urged to limit themselves to a single entry (which will be considered for each of the two awards); self nominations by students will not be accepted.

A selection committee of three AEEP members will read and judge each thesis on the basis of 100 points allocated as follows:
Scientific and Technical Merit of the Research - 30
Originality of Research - 30
Contribution to Advancement of Environmental Engineering - 30
Clarity of Presentation - 10

The selection will be made by September 1 so that the recipients and their advisors can be invited to the AEEP luncheon at the WEF meeting. The recipients of the 1992 awards were:

First Place: Daniel Noguera, "Soluble Microbial Products Modeling in Biological Processes," under the supervision of Bruce Rittmann, University of Illinois, Urbana-Champaign.

Second Place: Joseph Wood, "Modeling the Simultaneous Removal of Sulfur Dioxide and Hydrogen Chloride from Municipal Waste Combustion Flue Gas Via Spray Dryer Absorber," under the supervision of Mark Rood, University of Illinois, Urbana-Champaign.

Our thanks to James M. Montgomery Consulting Engineers for their generosity in sponsoring these awards and to the members of the 1992 Master's Thesis Review Panel: Gerald Speitel (Chairman), Ryan Dupont, and C.P. Huang.

Engineering Science and CH2M Hill Doctoral Thesis Awards

Entries are sought for the 1993 Outstanding Doctoral Thesis Awards, one sponsored by Engineering Science, Inc., and the other by CH2M Hill. Two separate but equivalent 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 compete should send three copies of the thesis to John Tobiason, Department of Civil Engineering,

University of Massachusetts, Marston Hall, Amherst, MA 01003. The theses should be accompanied by a simple letter of transmittal stating the student's current address and indicating when the thesis was completed. The copies will not be returned, so xerographic copies inexpensively bound are recommended.

The deadline for submission is March 15, 1993 for dissertations completed during the 1992 calendar year. Faculty advisors are urged to limit themselves to a single entry (which will be considered for each of the two awards); self nominations by students will not be accepted.

A selection committee of three AEEP members will read and judge each thesis on the basis of 100 points allocated as follows:
Scientific and Technical Merit of the Research - 30
Originality of Research - 30
Contribution to Advancement of Environmental Engineering - 30
Clarity of Presentation - 10

The selection will be made by September 1, 1993 so that the recipients and their advisors can be invited to the AEEP luncheon at the WEF meeting. The recipients of the 1992 awards were:

1992 Engineering Science Doctoral Award:

Lisa Alvarez-Cohen, "Cometabolic Biotransformation of Trichloroethylene and Chloroform by Methanotrophs-Experimental Studies and Modeling of Toxicity and Sorption Effects", under the supervision of Perry L. McCarty, Stanford University.

1992 CH2M Hill Doctoral Award:

Marc Edwards, "Ozonation: Transformation of Natural Organic Matter, Effect on Organic Matter - Coagulant Interactions, and Ozone-Induced Particle Destabilization", under the supervision of Mark Benjamin, University of Washington.

Our thanks to Engineering Science and CH2M Hill for their generosity in sponsoring these awards and to the members of the 1992 Doctoral Thesis Review Panel: Sandra Woods (Chair), John Tobiason and James Symons.

AEEP Outstanding Paper Award

Nominations are sought for the 1993 AEEP Outstanding Paper Award for a paper that has "withstood the test of time." Nominators should send a copy of the paper and a letter (2 pages maximum) to Amit Amirtharajah, School of Civil Engineering, Georgia Institute of Technology, Atlanta, GA 30332, Tele. (303) 492-6274, FAX (303) 492-7317. The letter should give the full citation, the reasons why the paper is 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 AEEP who are not an author or co-author of the paper; they are due July 15, 1993.

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 previous winners were:

- | | |
|------|---|
| 1983 | Stumm, W., and J.J. Morgan, "Chemical Aspects of Coagulation," <i>Jour. Amer. Water Works Assn.</i> , August, 1962. |
| 1984 | Stumm, W., and C.R. O'Melia, "Stoichiometry of Coagulation," <i>Jour. Amer. Water Works Assn.</i> , May, 1968. |

- 1985 McCarty, P.L., and A.W. Lawrence, "Unified Basis for Biological Treatment Design and Operation," J. San. Engrg. Div., ASCE, June, 1970.
- 1986 Dick, R.I., "Role of Activated Sludge Final Settling Tanks," J. San. Engrg. Div., ASCE, April, 1970.
- 1987 Dick, R.I., and B.B. Ewing, "Evaluation of Activated Sludge Thickening Theories," J. San. Engrg. Div., ASCE, August, 1967.
- 1988 McCarty, P.L., "Anaerobic Waste Treatment Fundamentals," Public Works, September-December, 1964.
- 1989 Weber, W.J., Jr., and J.C. Morris, "Kinetics of Adsorption on Carbon from Solution," and "Equilibria and Capacities for Adsorption Carbon," J. San. Engrg. Div., ASCE, April 1963 and June 1964.
- 1990 O'Connor, Donald J., "Oxygen Balance of an Estuary," Jour. 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 Applications," Envir. Sci. & Tech., 5 (11), 1105 (May, 1971.)
- 1992 Argaman, Y., and W.J. Kaufman, "Turbulence and Flocculation," J. San. Engr Div., ASCE, 96, SA2, 223-241, April, 1970.

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 of them for this award. Note that papers in all areas of environmental engineering, including air pollution, water quality, solid waste, hazardous waste, etc., are eligible. ☐

Deadline for April 1993 AEEP NEWSLETTER

Please submit articles for the April issue of the AEEP Newsletter to:

Chet A. Rock

University of Maine

Dept. of Civil Engineering

5711 Boardman Hall

Orono, ME 04469-5711

FAX: (207) 581-1215

Phone (207) 581-2170

by March 1, 1993.

CALL FOR PAPERS

25th Mid-Atlantic Industrial Waster Conference

CALL FOR PAPERS for the 25th Mid-Atlantic Industrial Waste Conference. The 1993 Mid-Atlantic Industrial Waste Conference will be hosted by Department of Civil Engineering, University of Maryland. The conference will focus on the technical aspects of process wastewater treatment, site remediation, sludge treatment and disposal, waste minimization and reuse, as well as on the managerial aspects of regulatory implementation and compliance. The conference will be held on July 7th - 9th, 1993 at the University of Maryland, University College Conference Center, College Park, Maryland. Prospective authors should submit seven (7) copies of a 500 word abstract by January 22, 1993 to Allen P. Davis, Department of Civil Engineering, University of Maryland, College Park, MD 20742 or by FAX to 301/314-9867. Consultants, environmental managers, regulators, and academicians who are interested in attending the conference can obtain information at the same address or by calling (301) 405-1958.

"Nitrogen in the Environment" Conference

Proposals for presentations are sought for a conference, *Nitrogen in the Environment*, to be held at the University of Maine, Orono, Maine, October 6th & 7th, 1993. The conference will provide research based information on nitrogen sources, movement and impacts. The intended audience is natural resources professionals working in agriculture, silviculture, wastewater treatment, urban stormwater, air emissions and estuarine ecosystems. One-page abstracts can be sent by FAX to Nick Houtman, Water Resources Program, (207) 581-1426 or by mail to 11 Coburn Hall, University of Maine, Orono, ME 04469-5715. For more information, call (207) 581-1491. ☐

1993 AEEP Committee Assignments

<u>COMMITTEE/TASK</u>	<u>CHAIR</u>	<u>VICE CHAIR</u>	<u>BOARD CONTACT</u>
AAEE Liaison	P. Aarne Vesilind	N. Bruce Hanes	P. Aarne Vesilind
AEEP Register Update	Gary Amy	Robin Collins	P. Aarne Vesilind
Achives	Dave Hendricks		President/Paul Bishop
Arrangements	Vice Pres/Jim Morgan		VicePres/Jim Morgan
Audit		David A. Long	Treas/Mike Stenstrom
Awards	Appiah Amirtharajah	Sandra L. Woods	Steve Randtke
AWWARF Liaison	William Knocke		Steve Randtke
Bylaws	Mark Benjamin	H. David Stensel	Steve Randtke
Computer Software	Joe DePinto		Mike Stenstrom
Directory	Mark Rood		Secretary/Ed Bouwer
Distinguished			
Lecturer	E. Joe Middlebrooks	Debra R. Reinhart	Joe Malina
Education	Mike Stenstrom	Bob Baillod	Mike Stenstrom
Enrollment Survey	Bill Ray		Jim Morgan
Latin American			
Initiatives			Joe Malina
Legislative Affairs	Bob Baillod		Bob Baillod
Long-Range Planning	P. Aarne Vesilind	N. Bruce Hanes	P. Aarne Vesilind
Membership	Ed Bouwer		Secretary/Ed Bouwer
Minority Recruiting	Jim Johnson		President/Paul Bishop
Newsletter	Chet Rock		Mike Stenstrom
Nominating	Past Pres/Bob Baillod	Past-Past Pres/Bruce Rittmann	Past Prest/Bob Baillod
Publications	Des Lawler		Joe Malina
1993 Research Needs			
Conference	Walter J. Weber, Jr.	James Johnson	Linda Abriola
Sustaining Member			
Liaison	Joe Malina		Joe Malina
USANC Relations	Bruce Rittman	Les Grady	Joe Malina
WEF & WEFRF Liaison			Mike Stenstrom

ENVIRONMENTAL PROTECTION ALONG THE U.S./MEXICO BORDER

The U.S./Mexico border is both a political separation of territories and a geographic region common and different to two nations. The length of the border is about 3,100 kilometers, which includes 10 states, six in Mexico and four in the U.S. Although the physical boundary is well defined, what is known as the border region extends over areas on both sides of the boundary. Those areas are intertwined historically, socially, politically and environmentally. These differences clash or combine to produce unique realities, which are characterized by dynamic interactions, whereby facts on one side affect the other.

Communities along the border show some interesting characteristics. First, population has increased at very high rates, mostly caused by the demand of labor offered by industrial development and the search for economic opportunities by immigrants. Second, growth has created a pressing demand for all kinds of resources, such as urban infrastructure and the environment. And third, there is not a comprehensive environmental protection program in place, which can ensure timely growth without environmental degradation. Importantly, environmental protection in the region is a very challenging goal because the environment and its resources are differently prioritized, regulated, and managed in each country.

The industrialization of the Mexican border dates back to the mid-sixties with the establishment of the "maquiladora" program. Maquiladoras are assembling plants for a variety of goods (e.g., computers and electronics). The program enables the temporary import of components made in the U.S. to be re-exported after assembling. Over the years, the program has significantly grown and maquiladoras have gradually turned into manufacturing plants with an increased consumption of materials and consequent generation of wastes. Although Mexico has taken meaningful steps to address environmental problems in the country (e.g., recently adopted comprehensive federal and state environmental laws), including the border, its enforcement has been too limited to warrant a proper management of past and present contamination. Contamination in the border has also been traditionally associated with illegal transfer and dumping of wastes across the international border.

Last August 12, 1992, President Bush announced the completion of the North American Free Trade Agreement (NAFTA) among the U.S., Canada and Mexico. Critics of the NAFTA contend that irreparable harm will be done to the environment as U.S. manufacturers move their operation south of the border to escape tougher environmental regulations. The NAFTA has also been criticized for not addressing the environmental issues that would ensure an environmentally sound North American free-trade zone, if ratified by the Congress.

As a result of the poor environmental record of the maquiladora program and the low priority placed by Mexico in environmental enforcement, people of the border region foresee that they and their descendants will have to pay a high environmental cost. This cost is expected to result from environmental degradation of fragile ecosystems, additional air, soil and water pollution, and competition for scarce water resources, among others.

A sign of hope developed this year with the issuance of the Environmental Plan for the Mexican-U.S. Border Area. The plan was negotiated and agreed to by Mexico's Secretaria de Desarrollo Urbano y Ecologia (SEDUE) and the U.S. Environmental Protection Agency. Representing a major step in the right direction, the plan has been however criticized in the region for being "a drop of water in a bucket," for missing comprehensiveness and realism of relevant issues, and particularly, for lacking the financial mechanisms and teeth for a timely response, preventing future and costly problems.

Another recent initiative was the first meeting of the U.S. EPA Environmental Border Plan Public Advisory Committee in Santa Fe, New Mexico, last July 24, 1992. This committee is the newest EPA advisory committee; its main responsibility is advising EPA on the Environmental Plan. A second meeting was held November 9, 1992, in El Paso, Texas. The twenty-four member committee began its activities by creating various subcommittees and task groups to evaluate and oversee the implementation of the plan.

Hector R. Fuentes is the Environmental Engineering Program Coordinator at Florida International University. He is a member of the AEEP Latin American Liaison Committee and one of the members of the EPA Border Plan Public Advisory Committee.

EMPLOYMENT OPPORTUNITIES

Auburn University

The Department of Civil Engineering at Auburn University invites applications for a tenure track faculty position in environmental engineering. The successful individual must have an earned PhD degree in civil, or environmental, engineering, have excellent written and oral communications skills, and have training and expertise in the traditional (especially biological wastewater treatment), water chemistry and water quality. The ideal candidate will also have sufficient training and expertise in transport processes and mathematical modeling to function as part of an interdisciplinary team performing research involving water quality, microbiology and hydrology in soil, groundwater and wetlands. Major responsibilities will include teaching undergraduate and graduate courses in environmental engineering, supervising masters and doctoral level students and developing a sponsored research program.

As Alabama's largest university, Auburn has an enrollment of some 22,000 including 2,800 graduate students. The Department of Civil Engineering administers programs leading to undergraduate degrees in civil engineering (BSCE), geological engineering (BSGE) and environmental science (BSENS) as well as graduate programs leading to both thesis and non-thesis masters degrees (MS and MCE, respectively) and the PhD. Currently, the Department has 21 full-time faculty and enrolls approximately 350 undergraduate (excluding freshman) engineers, 150 undergraduate environmental science students and 105 graduate students.

In support of the required teaching and research activities, the College of Engineering will provide a competitive salary and fringe benefits program and access to modern computing equipment including PCs, workstations, mainframes, and a supercomputer. The Department has well equipped laboratories and enjoys a close working relationship with researchers in agronomy, microbiology and chemistry as well as several other engineering disciplines.

Past and ongoing research within the broad field of environmental engineering include projects related to biological nutrient removal; surface water quality; water treatment; anaerobic

processes; and mathematical modeling of activated sludge and biofilm processes, in-situ treatment of contaminated groundwater, and remediation of oil-contaminated beaches, coastlines and wetlands.

The application deadline is April 1, 1993. The starting date is September 1993, or thereafter. Applicants should submit a statement of interest and a resume along with the names, addresses and telephone numbers of three references to: Dr. Joseph W. Tedesco, Search Committee Chairman, Department of Civil Engineering, Auburn University, Alabama 36849-5337.

Auburn University is an affirmative action/equal opportunity employer.

Applications from minority and women candidates are encouraged.

The City College of The City University of New York

The Environmental Engineering Group at the City College of the City University of New York invites applications for a post-doctoral position in a project involving biological treatment of high strength wastewater streams with focus on nitrogen removal. The project period is twenty months and the anticipated starting date is January 1993. Applicants with an earned Ph.D. in Environmental Engineering and experience in the design and operation of bench or pilot scale biological treatment systems will be preferred. Salary is competitive and will be established based on the candidate's qualifications. Good communication skills in both spoken and written English are necessary. Applications will be accepted until a suitable individual for the position is identified. Please forward a resume, names of three references and a thesis abstract to: Professor John Fillos, Department of Civil Engineering, Room 120, Y-Building, City College of New York, New York, NY 10031, Tel: (212) 650-8010, Fax: (212) 650-6965.

The City College of the City University of New York is an Affirmative Action/Equal Opportunity Employer.

Clemson University

The Department of Environmental Systems Engineering at Clemson University invites applications for a **tenure track faculty position** commencing August 1993. Applicants should have research experience and expertise in one or more of the following fields: **environmental-biotechnology/microbiology**, environmental chemistry, or radiochemistry. Although preference will be given to applicants at the Assistant Professor level, exceptional candidates at the Associate Professor level are encouraged to apply. The successful applicant must have outstanding research capabilities and will be expected to establish an active experimental research program, to develop and teach classes at the undergraduate and graduate level, and to direct graduate student research. A Ph.D. in the field of specialization is required. Interested candidates should submit a resume with at least three references to Prof. C.P. Leslie Grady, Jr., Department of Environmental Systems Engineering, Rich Environmental Research Laboratory, Clemson University, Box 340919, Clemson, SC 29634-0919. Review of applications will begin on January 15, 1993 and continue until the position is filled.

Clemson University is an Affirmative Action/Equal Opportunity employer.

Ohio University

Highly qualified individuals are invited to apply for the **Stocker Visiting Chair Professorship** in the Civil Engineering Department for the time frame of September 1992 - June 1994. Times shorter than two academic years will be favorably considered. Qualifications for consideration for the Stocker Chair position include prominent achievements in teaching and research or industry/government. A highly qualified person is sought to provide guidance and enrichment to the research and instructional programs in Civil Engineering, particularly in **environmental-geotechnology**. The individual is expected to teach, participate in research, present seminars, and to engage in professional activities which will bring distinction to Ohio University. The Visiting Chair position includes support in the form of travel, secretarial assistance, graduate student support, and computer facilities. An interdisciplinary Ph.D. in the **environmental-geotechnical** area is offered. External research support exceeds \$1.6M, a large portion of which comes via the Center for Geotechnical and Groundwater Research. The Department is housed in the \$20M Stocker Engineering Center. The Stocker Chair position is supported through the Stocker Endowment. Applications will be accepted until position is filled. Please direct inquiries or applications and resumes to: T. Richard Robe, Dean, College of Engineering & Technology, Ohio University, Athens, OH 45701, (614) 593-1479.

Ohio University is an equal opportunity, affirmative action employer.

Purdue University

Purdue University, School of Civil Engineering invites applications for a tenure-track position in Environmental and Hydraulics Engineering. Applicants must have interests, background, and expertise in any of the following areas: contaminant transport, environmental chemistry, environmental microbiology, groundwater or soil remediation, and radiological contamination. A Ph.D. degree is essential preferably with major study in civil engineering. The position will involve teaching undergraduate and graduate courses. Development of sponsored research is also a major requisite for this position. Prior teaching experience, practical experience, and professional registration also are desirable. Appointment will be at the assistant, associate, or professor level. Applications accepted until position is filled. Applications will be accepted until February 15, 1993 or until filled. Starting date is August 16, 1993. Applicants should send a detailed resume with names of three references to: Dr. Vincent P. Dmievich, Head, School of Civil Engineering, Purdue University, 1284 Civil Engineering Building, West Lafayette, IN 47907-1284.

Purdue University is an equal/affirmative action employer.

Purdue University

Purdue University's School of Civil Engineering invites application and nominations for the newly endowed **Lee A. Rieth Professorship in Environmental Engineering**. Candidates for this position should have attained an eminent national and international stature in the environmental engineering field. The position will involve graduate and undergraduate instruction and active research participation. The successful applicant must also provide synergistic leadership in the development of academic and research programs. The primary selection attributes will include: sustained scholarly performance, teaching excellence, research initiative, industrial and governmental contacts, demonstrated leadership, and qualification for appointment at the Full Professor level. The Rieth Professorship offers the opportunity and challenge to share in the future growth and development of a nationally recognized school. Purdue's premier academic program in engineering annually awards one of the largest number of engineering degrees in the country. The School of Civil Engineering has over 700 undergraduate students, 280 graduate students, and 60 faculty. Environmental and Hydraulic Engineering area within Civil Engineering has 12 faculty, a graduate enrollment of 94 students, and 25,000 square feet of laboratory research facilities. **Purdue Environmental Engineering** has more than a half century of tradition which is evidenced by the well known annual Purdue Industrial Waste Conference. Nominations and applications should be sent to: Professor Robert B. Jacko, Co-Chair, Search Committee for the Lee A. Rieth Professorship, Purdue University, 1284 Civil Engineering Building, West Lafayette, IN 47907-1284, Telephone:

(317) 494-2199, Fax: (317) 496-1107. Screening of applicants will begin immediately. Applications should include a statement of interest in the position, a curriculum vitae and the names and addresses of at least four references. Applications from women and members of minority groups are encouraged.

Purdue University is an Equal Opportunity/Affirmative Action Employer.

The University of Michigan

The University of Michigan, Ann Arbor, Michigan invites applications for faculty positions in civil and environmental engineering at all ranks. Qualifications include an outstanding academic record, significant involvement in research, a doctorate or equivalent in civil and environmental engineering and strong commitment to teaching and research. Particular areas of interest include: Environmental: process design in environmental engineering with an interest in solid and hazardous waste; geostatistics parameter estimation or optimization with an emphasis on subsurface contaminant transport; surface water quality with emphasis on numerical modeling; Civil Engineering Materials: pavements, viscoelastic-asphaltic materials, repair and rehabilitation, nondestructive testing, quality control, advanced construction materials, constitutive modeling; Transportation Engineering: transportation planning and design, transportation infrastructure management, advanced technologies such as IVHS. Please send resume and names of five references to: Professor E.B. Wylie, Chair, Department of Civil and Environmental Engineering, The University of Michigan, 2340 G.G. Brown Bldg., Ann Arbor, MI 48109-2125.

The University of Michigan is a non-discriminatory, affirmative action employer.

University of Akron

The University of Akron, Department of Civil Engineering, invites applications for a tenure track position in environmental engineering beginning in Fall 1993. The position will be at the assistant professor level. Applicants must have an earned doctorate in Civil Engineering with an environmental specialization, or in Environmental Engineering. An area of specialization in biological systems and bioremediation is desired; some groundwork knowledge is desirable. The successful candidate is expected to teach undergraduate and graduate courses, direct graduate student research, and develop externally funded research programs. Interested persons should send a resume and names of three (3) references to Dr. Wm. Brian Arbuckle, Chairman of the Search Committee, Department of Civil Engineering, The University of Akron, Akron, Ohio 44325-3905. To receive full consideration, applications must be received before March 15, 1992. This position is advertised pending availability of funding.

The University of Akron is an Equal Education and Employment Institution.

University of Colorado

The Department of Civil, Environmental, and Architectural Engineering seeks applications and nominations for faculty positions due to the retirement of faculty. A Ph.D. in engineering is required. Responsibilities include conducting research with students in an active graduate program and teaching undergraduate and graduate courses. The Department has a 28 full-time faculty, approximately 420 undergraduate students, and 250 graduate students. Its sponsored research budget for AY 1991-92 was \$3.6 million.

Two positions are expected to be filled in the areas of water resources and environmental engineering. The water resources position is at the junior level; specialization areas of interest include environmental fluid mechanics and hydrology. The environmental engineering position is expected to be filled at the senior level although outstanding junior candidates will be considered; preference will be given to applicants with interdisciplinary skills in water-related aspects of environmental engineering, including geoenvironmental engineering. Minority and women candidates are urged to apply for both positions.

To apply, please send a resume and the names of three references to Professor Hon-Yim Ko, Chair of Search Committee, Department of Civil, Environmental, and Architectural Engineering, Campus Box 428, University of Colorado, Boulder, Colorado 80309-0428. Review of applications will begin on January 1, 1993, although all applications postmarked before March 1, 1993 are eligible for consideration. Earlier applications will receive first consideration. Appointments can begin as early as August, 1993.

The University of Colorado at Boulder has a strong institutional commitment to the principle of diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including women, members of ethnic minorities and disabled individuals.

University of Houston

The Department of Civil and Environmental Engineering, University of Houston, invites applications for a tenure-track faculty position in the following fields: (a) air pollution measurement/control, or (b) hazardous waste management/remediation, or (c) environmental risk management. Candidates must have an earned doctorate and a background in engineering. Duties will include (a) instruction of undergraduate courses in environmental engineering and related disciplines and graduate courses in hazardous waste management and in the candidate's area of specialty, and (b) development and execution of funded research in the candidate's area of interest. Rank will be commensurate with experience in both instruction and research. Applications, including the names, addresses and telephone numbers of at least three references and a curriculum vitae, should be sent to: Chair, Search Committee, Department of Civil and Environmental Engineering, University of Houston, Houston, TX 77204-4791. Applications will be accepted through February 1, 1993. The appointment is expected to begin on September 1, 1993.

The University of Houston is an equal opportunity, affirmative action employer.

University of Missouri

The University of Missouri-Columbia seeks to fill a tenure-track faculty position in the Department of Civil Engineering beginning September 1, 1993, at the level of Assistant Professor or higher with rank and salary commensurate with qualifications. Expertise in one of the following areas is required: physical-chemical processes, hazardous and solid waste management, or groundwater pollution control. Also required: an earned Ph.D. or equivalent and demonstrated potential for strong leadership of graduate students and development of sponsored research. P.E. registration is desirable. Duties include undergraduate teaching, graduate teaching, advising, research and extension responsibilities. Applicants should send a letter of interest, a resume and the names, addresses and phone numbers of at least five references to: Dr. James W. Baldwin, Jr., Chairman, Department of Civil Engineering, University of Missouri-Columbia, Columbia, MO 65211; telephone (314) 882-6084. All applications received by January 15, 1993, will be considered. Additional applications will be considered until the position is filled.

The University of Missouri-Columbia, as an Equal Opportunity and Affirmative Action institution, encourages applications from qualified women and ethnic minorities.

Virginia Tech

The Department of Civil Engineering at Virginia Tech invites applications for a new permanent faculty position in Environmental Engineering beginning August, 1993. The position is envisioned to be at the Assistant Professor level, but faculty at higher levels are also encouraged to apply. A Ph.D. in Civil or Environmental Engineering or related field is required. Candidates from all Environmental Engineering disciplines will be considered; however, specific areas of emphasis in the search include (a) physical-chemical processes with application to water, wastewater or hazardous waste treatment; (b) environmental engineering microbiology; and (c) air quality engineering. The successful candidate will be expected to teach undergraduate and graduate courses, develop external funding to support research, and participate in scholarly and professional activities.

Candidates should submit a letter of application, a detailed biographical vitae, and the names of three references to: Dr. Clifford Randall, Search Committee Chair, Department of Civil Engineering, VPI & SU, Blacksburg, VA 24061-0246. Review of applications will begin February 1, 1993. The search will remain open until a satisfactory candidate has been identified.

Virginia Tech is committed to diversity among its faculty, and therefore encourages applications from women, people of color, and people with disabilities.

Conference

A conference on **Contaminated Aquatic Sediments: Historical Records, Environmental Impact, and Remediation** will be held on June 14-16, 1993 in Milwaukee, Wisconsin. The purpose of this symposium is to bring together experts from a variety of disciplines within the general area of aquatic sediment pollution to assess the state of knowledge, define developing problems and evaluate technologies for cleaning up contaminated sediments. The conference is sponsored by International Association on Water Quality (IAWQ), Society of Environmental Toxicology and Chemistry (SETAC), and U.S. Environmental Protection Agency Great Lakes National Program Office (GLNPO). Support has been obtained from The National Science Foundation. Deadline for discount registration is March 12, 1993.

For information contact Professor Erik R. Christensen, Organizing Committee Chair, Department of Civil Engineering and Mechanics, P.O. Box 784, University of Wisconsin-Milwaukee, Milwaukee, WI 53201. Telephone (414) 229-4968 or FAX (414) 229-6958.

Lewis Publishers

Lewis Publishers announces two new textbooks for 1993. They are: *Environmental Organic Chemical Reaction Mechanisms*, by Richard Larson, University of Illinois, and Eric Weber, U.S. EPA/Athens; and *Introduction to Environmental Toxicology*, by Wayne Landis, Western Washington University.



REMINDER

Deadline for April
1993 AEEP
Newsletter,
Monday, March 1st.

APPLICATION FOR MEMBERSHIP

in the
Association of Environmental Engineering Professors

Name _____

Official Title _____ Department _____

Business Address _____ Tel. _____

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Applying for: Membership Status Rank: _____
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PLEASE ATTACH RESUME

Dues are payable to the association on a calendar year basis.
The AEEP annual dues payment, prorated according to the date of application, is shown below.

INITIAL DUES PAYMENT REQUIRED BASED ON RANK AND DATE OF APPLICATION

RANK	1 Jan.	1 Apr.	1 July	1 Oct.
	31 Mar.	30 June	30 Sept.	31 Dec.
Professor	\$50.00	\$37.50	\$25.00	\$12.50
Associate Professor	25.00	18.75	12.50	6.25
Assistant Professor	25.00	18.75	12.50	6.25
Affiliate Member	20.00	15.00	10.00	5.00

Please return this form along with your dues to:

Edward J. Bower
Dept. of Geography and Environmental Engineering
The Johns Hopkins University
3400 N. Charles Street
Baltimore, MD 21218-2686

Enclosed are my AEEP dues in the amount of: US \$ _____

Signature _____

Date _____

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Association of Environmental Engineering Professors

NEWSLETTER

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