

# VEVVSLETTER

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**DECEMBER 1987** 

#### PRESIDENT'S CORNER

#### **Excellence in Teaching and Research**

One of the principal goals of our organization is to promote excellence in environmental engineering education and research. It is our task to enrich our students with versatile problem-solving skills in order that they may have productive and successful careers through the fullest utilization of their abilities. It is evident that the careers of our graduates may span thirty-five to forty years, and that the important environmental problems of the future are very likely to be different from the environmental problems we face today. Therefore, we must recognize that it is essential for our students to attain problem-solving skills which will allow for continual intellectual growth and self-learning.

Broadty stated, it is our mission to provide farsighted and enduring education. Therefore, our educational programs should encompass the learning of engineering-science fundamentals in order that our graduates will be sufficiently versatile and adaptable to address meaningful environmental problems today and in the future. some of the ways in which our curricula may respond to this mission may include the following:

- Through emphasis on fundamental concepts and incorporation of methodologies and technologies that provide the greatest opportunity for solving important problems.
- Through courses in which attention is paid not only to technical details but also to the larger perspective that addresses issues of economic feasibility and optimization, and risk and reliability.
- Through recognition that answers to complex problems can only be achieved by looking beyond traditional boundaries, necessitating interdisciplinary interactions.

As faculty members we face several challenges in attaining our educational goals. One challenge is

the tension that can develop between attention paid to teaching and research. We must avoid the trap of believing that research is the only legitimate task for faculty. On the other hand, we must appreciate that research is essential for maintaining the quality of our teaching. Without a stimulating research agenda, a faculty member may become state and outdated in less than ten years. We should strive to deliver excellent teaching and sound educational programs not in conflict with high quality research.

Other challenges we face include the need to develop more fully our students' oral and written communication skills. We also need to balance our instructional agendas in order to exploit most advantageously the ubiquitous mini- and microcomputers, and general purpose software, while at the same time determining the proper role for both judgement and experience. Students may utilize computers to provide simulations in order that they may learn both the power and limitations of theory. This may be complemented by activities that emphasize creative aspects of engineering design and innovation in which students tearn the difficulty of arriving at imaginative and practical solutions to engineering problems.

In many ways, one of the principal strengths among the graduate programs in environmental engineering is in the diversity of programs available to prospective students. The diverse character of the graduate environmental engineering programs results in part from the diverse nature of the research being conducted at the various institutions. We should encourage high standards of excellence in teaching and research, while recognizing that the focus of an individual program depends in part on the relative balance between attention given to teaching or research. On a national scale, we maintain intellectual vigor in our discipline through diversity. Therefore, we should be cautious before embracing trends that may lead to uniformity; and in this regard I am concerned about suggestions for accreditation of graduate engineering programs.

Although I am not in favor of accreditation at the graduate level, we should appreciate that this issue is being considered by accrediting societies. Recently I have encouraged various representatives of engineering societies to assess carefully their motives for such an endeavor. Accreditation of graduate programs may be a push towards greater conformity rather that greater excellence. In the realm of academic pursuits excellence is nurtured

through diversity and generation of ideas and intellectual exchange.

I welcome your comments and suggestions on these issues. Best wishes for a prosperous and productive New Year.

> Richard G. Luthy President

#### **AEEP NEWS AND ANNOUNCEMENTS**

#### **New Officers and Board Members**

The following were elected as new officers at the Annual Board Meeting on October 5: Richard G. Luthy, President, and George Tchobanoglous, Vice President. Desmond F. Lawler and H. David Stensel were elected to continue to serve as Secretary and Treasurer, respectively, during their terms as Directors. Newly elected Directors for the term 1987-1990 are: Thomas M. Keinath (Clemson), Charles R. O'Melia (Johns Hopkins) and Walter J. Weber, Jr (Michigan). The officers and directors also serve as board contact members to the various committees of the AEEP. The organizational structure of the AEEP, including committee chairmen and board contact members, will be promulgated on a regular basis through a summary listing in the AEEP membership directory.

Special thanks are to be extended to Gary L. Amy (Arizona), John F. Andrews (Rice), Nicholas L. Clesceri (Rensselaer) and J. Charles Jennett (Clemson) for their service as AEEP Directors over the past three years.

# 1987-1988 AEEP Committee Assignments

#### COMMITTEES

**AAEE Liaison** 

Chair: Frederick G. Pohland (Georgia Tech)
Vice Chair: R. Bruce Hanes (Tufts)

AWWARF Ligison

Chair: James K. Edzwald (Massachusetts)

**Archives** 

Chair: David W. Hendricks (Colorado State)

**Arrangements** 

Chair: George Tchobanoglous (Cal-Davis)

**Audit** 

Chair: John F. Ferguson (Washington)
Vice Chair: Dennis A. Clifford (Houston)

**Awards** 

Chair: James M. Symons (Houston)

**Bylaws** 

Chair: John F. Andrews (Rice)

Computer Software

Chair: J. B. Neethling (UCLA)
Vice Chair: Jon Liebman (Illinois)

Distinguished Lecturer

Chair: Makram T. Suidan (Illinois)

Education

Chair: Brian A. Dempsey (Missouri-Rolla)
Vice Chair: Robert Baillod (Michigan Tech)

1990's Education Conference Planning Chair: Robert Baillod (Michigan Tech)

**Enrollment Survey** 

Chair: J. Jeffrey Peirce (Duke)

Vice Chair: Richard W. Walters (Maryland)

Leaislative Analysis

Chair: Ray Letterman (Syracuse)

Unit Operations Manual Development Chair: Makram T. Suidan (Illinois)

Membership

Chair: Desmond F. Lawler (Texas)

Newsletter

Chair: Gregory D. Boardman (Virginia Tech)

Nominatina

Chair: E. Robert Baumann (Iowa State)

**Publications** 

Chair: Desmond F. Lawler (Texas)

Register

Chair: William R. Knocke (Virginia Tech)
Vice Chair: Gary L. Amy (Arizona)

Relations with USANC

Chair: Thomas M. Keinath (Clemson)
Vice Chair: David Jenkins (Cal-Berkeley)

Research

Chair: Charles O'Melia (Johns Hopkins) Vice Chair: J. J. Morgan (Cal Tech) Sustaining Member Liaison

Chair: Desmond Lawler (Texas)

#### **AD HOC COMMITTEES**

Silver Anniversary

Chair: Joseph F. Malina (Texas)

**Toxic/Hazardous Wastes** 

Chair: James W. Patterson (Illinois Inst. Tech.)

Interactions with Practitioners in Env. Eng. Educ.

Chair: John F. Andrews (Rice)

#### Engineering-Science/AEEP Best Thesis Award for 1987

The Engineering-Science Dissertation Award for 1987 was presented to Dr. David A. Dzombak at the AEEP annual membership luncheon on October 5 in Philadelphia during a break in activities of the Water Pollution Control Federation annual meeting. Dr. Dzombak's dissertation was titled "Toward a Uniform Model for the Sorption of Inorganic Ions on Hydrous Oxides". His thesis advisor was Francois M. M. Morel, Department of Civil Engineering, Massachusetts Institute of Technology. Dr. Dzombak was presented with a check for \$1000, while Professor Morel received a check for \$250.

In the future two dissertation awards will be presented, one supported by Engineering-Science and one supported by CH<sub>2</sub>M-Hill. Information on submittal of theses for consideration of awards will be given in the Spring Newsletter.

#### **AEEP Outstanding Paper Award**

Richard I. Dick and Benjamin B. Ewing received the 1987 AEEP Outstanding Paper Award at the AEEP Luncheon in Philadelphia. The award was made on the basis of their paper entitled, "Evaluation of Activated Sludge Thickening Theories", which was published in the Journal of the Sanitary Engineering Division in 1967 (Vol. 93, SA4, p. 9). Richard Dick also received the award in 1986. Congratulations, gentlemen!

# AEEP Conference on Research Directions in Environmental Engineering

Preparations are being made to conduct a conference on environmental engineering research directions. Richard G. Luthy and Charles R. O'Melia are preparing a proposal to the National Science Foundation to help support the conference. It is envisioned that the conference would provide a structure for the development of long-term research

directions in environmental engineering. The focus of the conference would be on discussion of comprehensive approaches for managing and controlling environmental problems through multiscale-multimedia perspectives, and discussion of the manner in which research results may be effectively transmitted from research "producers" to research "users". It is currently planned that the conference would occur in Washington during November, 1988. Additional information will appear in the Spring Newsletter.

#### **New AEEP Members — Welcome!**

William P. Bonner
Tennessee Technological University
Prescott Hall
Cookeville. TN 38505

Carl E. Burkhead
Department of Civil Engineering
University of Kansas
2006 Learned Hall
Lawrence, KS 66045

Leonard W. Casson
Department of Civil Engineering
University of Pittsburgh
944 Benedum Hall
Pittsburgh, PA 15261

Mark M. Clark Civil Engineering University of Illinois Newmark Civil Eng. Lab., MC-250 208 N. Romine St. Urbana, IL 61801

Simon Davies Civil Engineering University of Buffalo 212 Ketter Hall Buffalo, NY 14260

Michael A. Gealt
Department of Bioscience and Biotech.
Drexel University
32nd and Chestnut Streets
Philadelphia, PA 19104

Thomas J. Grizzard
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Virginia Tech — Occoquan Lab.
9408 Prince William Street
Manassas, VA 22110

Annette Guiseppi-Elie Department of Civil Engineering Drexel University Philadelphia, PA 19104

Susan J. Masten Department of Civil Engineering SUNY-Buffalo Buffalo, NY 14620 Albert B. Pincince Camp Dresser & McKee One Center Plaza Boston, MA 02108

Menahem Rebhun
Civil Engineering — Environmental &
Water Resources Engineering
Technion — Israel Institute of Technology
Haifa
Israel 32000

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Dept. of Mining, Environmental, and
Geological Engineering
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Socorro, NM 87801

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Cincinnati. OH 45221

R. Scott Summers
Civil and Environmental Engineering
University of Cincinnati
Rhodes Hall
Cincinnati, OH 45221

Ning H. Tang Department of Civil Engineering University of Puerto Rico Mayaguez, PR 00709

John E. Tobiason Department of Civil Engineering University of Massachusetts Amherst, MA 01003

#### Deadline for the April 1988 Newsletter

Please mail articles for the April Issue of the AEEP Newsletter to the editor, G. D. Boardman, by March 1, 1988

#### **GENERAL NEWS**

### Establishment of a Science and Technology Research Center Program by NSF

As part of the President's Science and Technology Initiative with reference to his State of the Union Message on January 27, 1987, the National Science Foundation has established a new Science and Technology Research Centers Program (STC). The goal of the program is to help maintain U.S. preeminence in science and technology and provide an adequately sized pool of scientists and engineers with the quality and breadth of experience required to meet the changing needs of science and society.

Information regarding this new program (solicitation NSF 87-75) may be obtained from Dr. Bryan:

Edward H. Bryan, Ph.D., Program Director Environmental Engineering National Science Foundation Washington, D.C. 20550

The deadline for receipt of proposals is January 15, 1988, for Center proposals and February 1, 1988, for Planning Grant Proposals.

#### **AAEE Certification**

The Association of Environmental Engineering Professors is a sponsoring organization of the American Academy of Environmental Engineers (AAEE). Each sponsoring organization of the Academy may submit each year a list of not more than five of its quali-

fied members for consideration by the AAEE Board for certification as a Diplomate.

The candidates must meet the following AAEE criteria:

- BS in engineering or a related field.
- Professional Engineer's license.
- Professionally engaged on a full-time basis.
- 4. Must have at least fifteen years of environmental engineering experience in one or more of the specialty fields. Eleven of the fifteen years shall be in responsible charge, which work must include active participation with responsibility primarily in one or more fields of environmental engineering.

The candidate applications will be reviewed to see that all criteria are met and will be presented to the AEEP Board for approval. The Board approved applications then will be submitted with a letter of transmittal to AAEE for consideration by the AAEE Admissions Committee and Board of Trustees.

Any active AEEP member in good standing who meets the above criteria is eligible for nomination. All applications should include letters of endorsement from three AEEP members who are familiar with the candidate's achievements. Consideration shall be given to the record of service to AEEP.

In addition to sponsor nomination, AEEP members meeting the above criteria may apply directly to the Academy for membership, with acceptance being conditional on successfully passing an oral examination. In addition, members that do not have the

experience noted above but have eight (8) or more years experience in environmental engineering can apply directly to the Academy, with acceptance being conditional on successfully passing both a written and an oral examination. The Academy's address and telephone number is:

American Academy of Environmental Engineers 132 Holiday Court, Suite 206 Annapolis, MD 21404 (201) 266-3311

Qualified AEEP members wishing to be sponsored as nominees of AEEP, or desiring more information, should apply directly to or contact the AAEE Trustee, Dr. Frederick G. Pohland, School of Civil Engineering, Georgia Institute of Technology, Atlanta, GA 30332; Tel. (404) 894-2265.

### WPCF Robert A. Canham Fellowship

Applications are now being received for the Robert A. Canham Fellowship. The Fellowship, honoring the retired WPCF executive director, provides \$2500 for a study tour in England of the research and development facilities of the Water Research Center, Inc., and a treatment facility.

For information and application forms contact:

James H. Suddreth
Technical and Educational Services
Water Pollution Control Federation
601 Wythe Street
Alexandria, VA 22314-1994
(703) 684-2406

#### **WPCF Student Paper Competition**

The Water Pollution Control Federation is inviting stucients to submit papers that concern water pollution control, water quality problems, water-related concerns, or hazardous wastes. An Award of \$1000 for the best paper will be made to students in each of the following three categories: Operations students, Bachelors and Masters students, and Ph.D. students.

A 250- to 1000-word abstract should be sent to James Suddreth of the Water Pollution Control Federation (address below) before February 1, 1988. The Student Activities Committee will review the abstracts and select the winners.

James H. Suddreth
Technical and Educational Services
Water Pollution Control Federation
601 Wythe Street
Alexandria, VA 22314-1994
\$\mathbb{T}\$ (703) 684-2406

#### Free IAWPRC Memberships for Graduate Students

From revenue generated by an endowment fund, the U.S.A. National Committee (USANC) of the International Association on Water Pollution Research and Control (IAWPRC) once again will award a number of gratis one-year student memberships in IAWPRC. Included are subscriptions to Water Research and Water Quality International. Awards will be made on a first-come basis subject to the condition that not more than one graduate student from any one university be granted an award unless fewer applications than awards available are received by the application deadline (1 February 1988). Graduate students wishing to be considered for such an award should have their faculty advisor nominate them in a letter directed to:

Dr. T. M. Keinath
USANC Secretary-Treasurer
Environmental Systems Engineering
Clemson University
Clemson, SC 29634-0919

No university should nominate more than three graduate students. If more than one is nominated, the list should be prioritized.

### **AWWA Publishing Plans**

The book publishing division of the American Water Works Association has embarked on a program to locate and publish new books by individual or corporate authors. John Rieman, AWWA Senior Technical Editor, announced that AWWA is soliciting manuscripts concerning all phases of water utility management and operations.

Authors interested in additional information should contact John Rieman, AWWA Senior Technical Editor, 6666 West Quincy Avenue, Denver, CO 80235; phone (303) 794-7711.

# **IIE Creates New Department**

Richard M. Krasno, President of the Institute of International Education, the largest not-for-profit educational exchange agency in the United States, announced the creation of a new Department of Science and Technology. Located in IIE's office in Washington, D.C., the department will be under the leadership of Steven Ebbin, who has been appointed a Vice President of the Institute.

# PERSONAL ACCOMPLISHMENTS

Frank E. Dalton was named 1986 Government Civil Engineer of the Year for Zone III of the American Society of Civil Engineers (ASCE). Dalton is general superintendent of the Metropolitan Sanitary District of Greater Chicago. The award is presented annually to engineers in public service who have made substantial contributions to the engineering profession.

Walker is the winner in ASCE's Zone III which consists of the central United States.

### **CONFERENCES AND EDUCATIONAL PROGRAMS**

# Joint CSCE-ASCE National Conference on Environmental Engineering

For the first time, the ASCE National Conference on Environmental Engineering will be held outside the United States. The Canadian Society for Civil Engineering, Environmental Engineering Division, will be co-sponsoring and hosting the event from July 13-15, 1988, in Vancouver, B.C., Canada. Upon invitation from the ASCE, the local host will be the Environmental Engineering Group, Department of Civil Engineering, University of British Columbia.

The Keynote Speaker, on opening morning, will be Mr. David LaRouche, Secretary, U.S. Section, International Joint Commission, Washington, D.C. Further insight into major environmental issues will be provided by Dr. David Jenkins, Berkeley, CA, who will deliver the Simon W. Freese Lecture.

For complete conference details and registration information, please contact:

Dr. Donald Mavinic
Conference Chairman
Department of Civil Engineering
University of British Columbia
Vancouver, B.C.
Canada V6T 1W5

(604) 228-4752

## International Symposium on Anaerobic Digestion

The Fifth International Symposium on Anaerobic Digestion will be held in Bologna, Italy, from May 23-30, 1988. Organized principally by the IAWPRC Speciality Group on Anaerobic Digestion, the Italian National Committee to IAWPRC, the Italian Commission for Nuclear and Alternative Energy Sources, the Italian Water Research Institute of CNR and the Commission of European Communities, invited lectures, short communications and poster presentation, as well as an exhibition, workshops and excursions will be included in the week-long program of events. Technical presentations will emphasize anaerobic digestion fundamentals, applications to agroindustrial wastes and domestic sewage, process control and resource and reuse.

For further information concerning AD88, contact:

Fifth ISAD Secretariat SOGEPACO S.p.A. Piazza della Constituzione, 4 40128 Bologna Italy

If interested in receiving a copy of the program announcement or obtaining further information on the IAWPRC Speciality Group on Anaerobic Digestion, contact:

Dr. Frederick G. Pohland, Chairman School of Civil Engineering Georgia Institute of Technology Atlanta, GA 30332 USA

# Annual Waste Testing and Quality Assurance Symposium

Papers are requested for the Fourth Annual Symposium on Waste Testing and Quality Assurance scheduled for Washington, D.C., July 11-15, 1988. Papers are solicited on the following topics:

- Analytical Test Methods
- Biological Test Methods
- Laboratory Information Management
- Mobility Methods
- Sampling and Field Methods
- Quality Assurance
- Enforcement

Authors interested in presenting papers or poster displays are invited to submit 500 word abstracts no later than December 31, 1987. These should be sent to Denise Zabinski, Office of Solid Waste (WH-562B), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460. The program will be finalized and authors advised whether their abstracts are accepted by March 2, 1988.

#### Diploma Program in Waste Management—Groundwater Contamination

McGill University has recently established a twosemester diploma program in Waste Management—Groundwater Contamination. Using the combined resources of the Geotechnical Research Centre and the Environmental Engineering Group, both in the Department of Civil Engineering, this program will address both the modelling and treatment aspects of groundwater pollution. Students with a bachelor's degree in Agricultural, Civil, Chemical and Environmental Engineering, as well as those with a degree in the Biological, Chemical and Geological Sciences, qualify for the program.

For further information, please contact Professor Ronald Gehr, Chairman of the Graduate Program, Department of Civil Engineering, McGill University, 817 Sherbrooke St. W., Montreqi, Quebec, Canada H3A 2K6.

## **FACULTY POSITIONS**

# University of Alberta, Edmonton

Applications are invited for a full-time tenure track position in the field of Environmental Engineering commencing July 1, 1988. The intention is to appoint at the level of Assistant Professor (salary range \$31,612 to \$45,340); however, higher levels will be considered if appropriate. The applicant should have a Ph.D. degree with specialization in Environmental Engineering. The successful applicant will be expected to (a) have a strong background and interest in water distribution and wastewater collection systems, (b) instruct undergraduate and graduate level courses in Environmental Engineering and assist at the undergraduate level in other aspects of Civil Engineering education, and (c) engage in research in the above field.

The University of Alberta, founded in 1908, is situated in Edmonton, a city of 600,000. The average graduating class in Civil Engineering is 90. Currently there are 140 graduate students in the Department.

Application deadline: February 15, 1988.

In accordance with Canada Employment and Immigration requirements, priority will be given to Canadian citizens and permanent residents.

Submit applications, including resume, employment history, and names of referees to:

Professor J. G. MacGregor, Chairman Department of Civil Engineering University of Alberta Edmonton, Alberta Canada 16G 2G7 \$\times\$ (403) 432-5114

The University of Alberta is committed to the principle of equity in employment.

### **Vanderbilt University**

The Department of Civil and Environmental Engineering invites applications for a senior position in the area of waste treatment process engineering, with emphasis on the biological or chemical treatment of industrial wastes, priority pollutants, or hazardous wastes especially desired. The appointment will be at the rank of Professor and the individual appointed will be expected to provide both intellec-

tual leadership and programmatic direction for the graduate program in Environmental and Water Resources Engineering. Candidates should have an earned doctorate, at least ten years of successful teaching, research and service, and an outstanding record of research activity, including securing outside funds, directing the work of students or a research group and publishing. A commitment to a high level of teaching on the graduate and undergraduate levels is also necessary. The position will be available in September, 1988. Send applications, resume, and a list of three references to Dr. Edward L. Thackston, Chairman, Box 133, Station B, Nashville, TN 37235. Vanderbilt is an equal opportunity employer. Applications from women and minorities are especially desired.

### Rice University

The Department of Environmental Science and Engineering, George R. Brown School of Engineering, Rice University, Invites applications for a tenure track position of the Assistant Professor level, beginning July 1, 1988.

Applicants must be engineers with the Ph.D. or equivalent. An active research program and teaching at the undergraduate and graduate levels will be required. Research interests should be in the physical and chemical processes of water and wastewater treatment, and the fate and transport of organic and inorganic compounds in the environment. Salary is competitive and negotiable.

Send curriculum vitae to Dr. C. H. Ward, Chairman, Department of Environment Science and Engineering, Rice University, P. O. Box 1892, Houston, TX 77251. Rice University is an Affirmative Action/Equal Opportunity Employer.

#### University of North Carolina at Chapel Hill

The Faculty of the School of Public Health at UNC Chapel Hill seek qualified candidates for Department Chair of Environmental Sciences and Engineering.

Responsibilities: Provide leadership in achieving curricular and research goals; attract external research funding; recruit faculty and encourage de-

velopment of interaction with the public health community; and administer other matters pertaining to the operation of a large academic department with a graduate research emphasis.

#### Qualifications:

- Earned doctorate in a discipline closely associated with the fields of environmental sciences and engineering.
- Record of professional activities, research and scholarship which establishes preeminence at the national/international level.
- Possession of the requisite administrative skills for the management of a large academic program.

Application review will begin on November 1, 1987, and continue until the position is filled. Expected starting date is July 1, 1988.

Application: Send resume and names of three references to:

Professor Dirk Frankenberg, Chair Environmental Sciences and Engineering Search Committee Room 171A 7400 Rosenau Hall, 201H University of North Carolina at Chapel Hill Chapel Hill, NC 27599

The University of North Carolina at Chapel Hill is an Equal Opportunity, Affirmative Action Employer.

### Michigan Technological University

The College of Engineering at Michigan Technological University is pleased to announce the creation of the Ventures Chair in Engineering with emphasis in one or more areas of waste management, resource recovery, and environmental systems. This is part of a rapidly developing sphere of excellence in the University.

Applications and nominations are invited for the professorial position. The successful candidate should possess recognized academic and practical experience. Background in management of industrial and hazardous waste and/or specialized areas of resource recovery technology will be an advantage.

Inquiries or applications, accompanied by detailed curriculum vitae and names of three references should be sent to:

Professor C. Robert Baillod, Chairman Ventures Chair Search Committee College of Engineering Michigan Technological University Houghton, Michigan 49931 (20) (906) 487-2530

Nominations and applications will be accepted until the position is filled. *Michigan Technological Uni*versity is an equal opportunity educational Institution/equal opportunity employer.

# APPLICATION FOR MEMBERSHIP in the Association of Environmental Engineering Professors

Official Title		Dept		
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Applying for: Membership Sto	tus 🗆 Rank:	· · · · · · · · · · · · · · · · · · ·		Affiliate Status
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RANK	1 Jan. 31 Mar.	4 Apr. 30 June	1 July 30 Sept.	1 Oct. 31 Dec.
Professor Associate Professor Assistant Professor Affiliate Member	\$50.00 25.00 25.00 20.00	\$37.50 18.75 18.75 15.00	\$25.00 12.50 12.50 10.00	\$12.50 6.25 6.25 5.00
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Desmond F. Lawler Department of Civil Engine University of Texas Austin, TX 78712	enimg			
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# ASSOCIATION OF ENVIRONMENTAL ENGINEERING PROFESSORS Attn: Dr. Desmond F. Lawler Department of Civil Engineering, ECJ 8.6 The University of Texas at Austin Austin, Texas 78712

Item #	Title	Member Price	Non-Mem. Price	Quantity	Amount
1	Environmental Engineering Unit Operations and Unit Processes Lab. Man. (Ed.: O'Connor)	\$10.00	\$20.00		
2	Aquatic Microbiology Laboratory Manual (Cooper, et al.)	\$ 7.00	\$ 7.00		
3	Proceedings, Fourth Conference on Environ- mental Engineering Education (June, 1980, Toronto)	Free	\$ 3.00		
4	Fundamental Research Needs for Water and Wastewater Systems (Proceedings of the Dec., 1980 AEEP/NSF Conference)	Free	Free		
5	Register of Environmental Engineering Graduate Programs (1984 Edition)	\$15.00	\$30.00		
6	So You Want to Be an Environmental Engineer?	\$ .50	\$ .50		
7	AEEP Computer Manual (Ed.: Crittenden)	\$20.00	\$40.00		
8	AEEP Diskette (Set of 5 Discs)	\$10.00	\$20.00		
Items	POSTAGE AND HANDLING RATES		1	TAL customers .25% sales tax	
1-4 7,8	1 - 3 volumes @ \$2.00; 4 - 6 @ \$4.00; 7 - 9 @ \$6.00; each additional 5 @ \$2.00			ge/handling oostage chart)	
5	same as items 1 - 4 except 1 volume of this counts as 2 of items 1 - 4		TOTAL	ENCLOSED	
6	1 - 2 @ \$0.50; 3 - 10 @ \$1.00; 11 - 25 @ \$2.00; each additional 25 @ \$1.00				
•	TOTAL postage & handling				

These rates apply for  $\underline{Book}$   $\underline{Rate}$  postage within the United States. For delivery outside the U.S. or for speedier delivery (by First Class Mail or UPS), additional postage and handling charges will be billed to you.

BILLING ADDRESS:	SHIPPING ADDRESS (if different):		

Prepayment required. Please forward a check or money order payable to AEEP to the above address.

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Thomas M. Keinath (1988-90) Clemson University

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Richard G. Luthy (1986-88) Carnegle-Mellon University

Charles R. O'Melia (1988-90) Johns Hopkins University

H. David Stensel (1987-89) University of Washington

George Tchobanoglous (1987-89) University of California at Davis

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