



# Newsletter

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AUGUST, 1979

## PRESIDENT'S CORNER

Professor P. Aarne Vesilind has completed our eighth annual survey of graduate student enrollments in Environmental Sciences and Engineering, and the results are of considerable interest. It is estimated that the total number of full time graduate students in Environmental Sciences and Engineering in 1978 was 2,479, of which 454 were in Environmental Sciences. **An additional enrollment of 1,463** part time graduate students was estimated, and a total of 568 undergraduate students were identified. Federal traineeships were estimated at 260. The total enrollment has dropped sharply since 1973, but has apparently stabilized at about 2,500 full time graduate students since 1976.

The relationship of this educational effort to the manpower needs of society will not be considered here, although my own observations at the University of North Carolina indicate many more offers of employment to our students with masters and doctoral degrees in Environmental Engineering than there are students available. Neither do I wish to address at this time the financial support for these graduate students, although the apparent ratio of about ten full time graduate students enrolled per federal traineeship available can be interpreted as indicating a significant return for this federal investment. Support for education and research in Environmental Sciences and Engineering requires substantial time and effort for faculty members, but decisions in these areas are controlled by the appropriate funding agencies. This is appropriate if the views of the academic community are considered in these decisions, and AEEP will continue to exert vigorous effort in this regard.

I do wish to consider here an aspect of this subject about which we do make decisions, i.e., the quality, content, and directions of our educational programs. While we must be receptive to the needs and views of those in the private sector and in government, decisions about educational programs reside largely within the academic community, along

with the responsibility for the consequences of these decisions. Society's ability to plan and implement programs for managing environmental quality and public health resides to a large extent with the 4,000 full and part time graduate students identified by Professor Vesilind's survey, and with their successors. In turn, the capabilities of these present and future students depend on the education we provide for them.

I would like to focus your attention on the forthcoming Fourth National Conference on Environmental Engineering. This conference is cosponsored by AEEP and the American Academy of Environmental Engineers. It will be held in Toronto, Canada on June 19 to 21, 1980 at the campus of the University of Toronto. These dates correspond to the Thursday, Friday, and Saturday immediately preceding the next conference of the International Association for Water Pollution Research (IAWPR) which is also in Toronto.

At this conference we will have an opportunity to discuss present and future educational needs in Environmental Sciences and Engineering, and to make decisions about them. I urge you to attend this conference. I urge you to participate in the planning of the conference. To get involved, contact Professor James W. Patterson, Chairman of AEEP's committee for planning the conference.

Charles R. O'Melia

## AEEP DISTINGUISHED VISITING LECTURER

The AEEP visiting lecturer program alternates between North American and other candidates. Nomination of candidates from North America are solicited for a lecture tour to be arranged in the Spring of 1980. Nominations are also solicited for European/Asian/South American/African... candidates for a lecture tour in Spring, 1981. Suggestions for candidates should be sent before September 30 to G. Lee Christensen, Civil Engineering Department, Villanova University, Villanova, PA 19085.

## AEEP MEMBER WINS HUBER AWARD

Dr. Ju-Chang "Howard" Huang, professor of civil engineering and environmental health at the University of Missouri-Rolla, is the recipient of the 1979 Walter L. Huber Civil Engineering Research Award conferred by the American Society of Civil Engineers (ASCE). Only five individuals, nationally, are nominated each year by ASCE's Technical Council on Research to be recognized for notable achievements of technical research in civil engineering.

Dr. Huang received his B.S. degree from National Taiwan University and M.S. and Ph.D. degrees from the University of Texas at Austin. He joined the faculty at UMR in 1967.

In the past 10 years he has directed 16 sponsored research projects and published more than 40 papers in technical journals, books, magazines and proceedings of professional conferences. At the present time he is directing two research projects. One is supported by the U.S. Environmental Protection Agency and the other by the Department of the Interior Office of Water Research and Technology.

Dr. Huang was the recipient of an American Society for Engineering Education/Ford Foundation Resident Fellow Award in 1972. He has been elected a Faculty Honor Member by UMR's Phi Kappa Phi Honor Society and an Eminent Engineer by Tau Beta Pi Honor Engineering Society. In 1976 he was named Young Engineer of the Year by the Rolla chapter of the Missouri Society of Professional Engineers.

## AEEP ARCHIVES

Kurt Keeley, working under the direction of Dave Hendricks of the Archives Committee, is seeking to complete a collection of APSE and AEEP Newsletters. Anyone having any of the issues listed below is urged to help Kurt by sending them to:

Kurt Keeley  
American Water Works Association  
6666 W. Quincy Avenue  
Denver, Colorado 80235

Volume No.	Issue No.
1	1,2,4
2	2
5	4
6	A11
7	A11
8	1,3
10	4
12	2

## LAST CALL

As a service of the AEEP Membership, the Board of Directors has decided to publish the titles of theses completed each academic year by June 30. Only those lists submitted by the membership will be included in the listing. The next directory will appear early next fall for the 1978-79 work.

Time interval: July 1, 1978 to June 30, 1979

Classification of Titles:

Air Pollution  
Agricultural Waste Management  
Instrumental Methods of Analysis  
Industrial Waste Treatment  
Land Treatment  
Non Point Pollution  
Rivers, Estuaries, and Lakes  
Solid Wastes  
Water and Wastewater Treatment  
Water Management

You may also use other classifications if there are a sufficient number of titles.

Format: "Title of Paper", Name of Author (Ph.D. or M.S.), X pp., Month, Year, Name of University (Name of Faculty Advisor).

Comments: Since the availability of documents varies, persons interested in a specific publication will be asked to contact the Faculty Advisor directly.

Deadline: Submit by August 31, 1979 to:

J. F. Judkins, Jr. and J. M. Morgan  
Co-Editors  
AEEP Newsletter  
Department of Civil Engineering  
Auburn University  
Auburn, Alabama 36830

## DEADLINE FOR OCTOBER NEWSLETTER

Items to be included in the next issue should be received by the Editors no later than September 6, 1979. Please submit any items of general interest to the profession to:

J. F. Judkins, Jr. and J. M. Morgan  
Co-Editors, AEEP NEWSLETTER  
Department of Civil Engineering  
Auburn University  
Auburn, AL 36830  
(205-826-4320)

## FOURTH NATIONAL CONFERENCE ON ENVIRONMENTAL ENGINEERING EDUCATION

The pace of preparation for the 4th National Conference on Environmental Engineering Education is accelerating, under the guidance of the Conference Steering Committee. This Committee was designated by the Conference Co-sponsors, AEEP and the American Academy of Environmental Engineers, to organize the conference and select those issues to be addressed by the conferees. The committee membership is:

Russ F. Christman  
George P. Hanna, Jr.  
Roger A. Minear  
Joe G. Moore, Jr.  
August T. Rossano  
Roy F. Weston  
James W. Patterson, Chairman

The University of Toronto, through Gary Heinke, Chairman of the Department of Civil Engineering, has extended an invitation to host the conference. This offer has been accepted, and the conference will take place on the University of Toronto campus in downtown Toronto. The conference timing is Thursday-Saturday noon, June 19-21, 1980. The times and location were selected to complement the IAWPR Conference in Toronto and the APCA Conference in Montreal, both scheduled for the following week of June 22-27, 1980. Professor Barry Adams of the University of Toronto has accepted responsibility for local arrangements.

The first morning of the conference will be devoted to a discussion of the conference format and objectives plus presentation of a series of brief reports reviewing the current status of environmental engineering education. The remainder of the conference will consist of workshop and plenary sessions dealing with the four focus issues selected by the Steering Committee. The four issues are listed here, together with the name(s) of the Steering Committee liaison member(s) with responsibility to oversee the pre-conference preparation associated with that issue. Listed after each major issue are a few example sub-issues.

**CHARACTERISTICS OF EXCELLENCE IN ENVIRONMENTAL ENGINEERING PROGRAMS** — Rossano and Hanna

- Baccalaureate Requirements for Graduate Study
- Sources and Types of Student Support
- Student:Faculty Ratios
- Breadth of Academic Offerings
- Accreditation of the First Degree
- The Unique Problems of Programs of Limited Faculty Size

**ESSENTIAL COMPONENTS AND THEIR BALANCE IN ENVIRONMENTAL ENGINEERING EDUCATION** — Moore

- Foundation Science Disciplines
- Internships
- The Role of Research and/or Independent Study
- The Role of Continuing Education
- Building Professionalism

**THE RELATIONSHIP OF BACCALAUREATE TO GRADUATE ENVIRONMENTAL ENGINEERING EDUCATION** — Christman

- Undergraduate Options, Minors and Majors  
Breadth vs. Depth
- Baccalaureate Degrees in Environmental Engineering
- Graduate Training of the Baccalaureate Environmental Engineer
- Training the Baccalaureate Scientist
- Interfacing Baccalaureate Engineers with Graduate Environmental Engineering Programs

**MICRO vs. MACRO ORIENTATION IN ENVIRONMENTAL ENGINEERING EDUCATION** — Weston

- Specialization vs. Generalization at the Masters Level
- The Credibility of Non-Engineering Components of Graduate Environmental Engineering Programs
- Integration of Air, Water and Other Environmental Engineering Subjects
- The Proper Role of the Practicing Professional in Influencing Educational Directions

Prior to the conference itself, draft position papers will be developed for each conference issue. Persons interested in participation in this activity, or any other pre-conference or conference activity, may contact either the Steering Committee member assigned to a particular issue, or Jim Patterson, Conference Chairman.

## UNDERGRADUATE REGISTER AVAILABLE

Copies of the *Register of Undergraduate Environmental Engineering Programs* are now available at a cost of \$6.00 each postpaid. Order from:

Dr. D. B. Aulenbach  
Department of Chemical and  
Environmental Engineering  
Rensselaer Polytechnic Institute  
Troy, New York 12181

