AEESP Newsletter
Association of Environmental Engineering and Science Professors

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AEESP.org

President's Letter

Pedro J. Alvarez

Dear AEESP Members,

The time has come for me to step down as AEESP president and pass the torch to Phil Singer, who is a great choice to continue our tradition to promote excellence in the development and dissemination of knowledge in environmental engineering and science.

As a result of the great work of our board of directors and numerous volunteers that serve on various committees, I leave AEESP in great shape. Our membership now exceeds 800, the largest ever, at a time when most professional associations are experiencing retention problems. I would like to believe that this reflects not only our success in providing a sense of community, but also value to our constituency in recognizing excellence in teaching and research and enhancing networking and mentoring opportunities. For example, this past year we instituted a new award that honors the memory of Fred Pohland by recognizing lifetime achievements in bridging research and practice. Additional new benefits to our membership include mentoring and proposal writing workshops for our junior members (offered at our biennial conferences) and registration at discounted rates for the WEF annual conference. We also have started to re-institute our graduate programs registry as part of the ongoing Web site modernization effort, and to gather information on our student pipeline to evaluate (in cooperation with AAEE) whether it is adequate in relation to market needs.

AEESP has continued to serve our profession by sponsoring conferences and lecture series, and by providing leadership in advocating environmental policies and research priorities that are timely and important to society. Therefore, it has been my distinct pleasure and honor to serve AEESP as its 38th president. As you know, AEESP is strongest when its members are involved, so I thank you for (and encourage you to continue) your support to this great organization.

Pedro J. Alvarez, Ph.D., P.E., DEE, F.ASCE
George R. Brown Professor of Civil and Environmental Engineering
Rice University
President, AEESP

AEESP Board of Directors, left to right: 1st row: Angela Bielefeldt, Menachem Elimelech, Kimberly Jones; 2nd row: Peter Adriaens, Philip Singer, James Mihelcic; 3rd row: David Freedman, Pedro Alvarez; 4th row: Keri Hornbuckle, William Ball, Charles Werth.

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AEESP Newsletter online

http://www.aeesp.org/pubs/NewsArch.html

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AEESP participates in Congressional Visits Days

by Allen P. Davis, AEESP Government Affairs Committee

On March 28 and 29, 2006, Kimberly Jones, Pedro Alvarez, and Allen Davis visited the offices of ten members of U.S. Congress as part of the official Congressional Visits Day. Included in these visits were several key members of Congressional appropriations. Our primary goal was to request support for the 8% increase in budget for the National Science Foundation that was requested by the president in his FY07 budget. Generally, all staff expressed full support for this initiative. Secondary requests were keyed to the specific member and included requests for support of EPA STAR research and fellowships, and for environmental nanotechnology. As a closing statement, the expertise of AEESP was offered as a resource to assist with complex environmental issues.

Congressional Visits Days is sponsored by the Science, Engineering, and Technology Group, of which AESSP is a member (www.aas.org/policy/cvd/index.html).

With these visits, AEESP works for support for our most important funding agency, the NSF. We also strive to develop a working relationship to offer our expertise to our legislators on environmental issues important to the nation.

Senate offices visited were those of Senators Cornyn (TX), Hutchison (TX), Mikulski (MD), and Sarbanes (MD). House offices included Congressmen Culberson (7th TX), Cummings (7th MD) Green (9th TX), Hoyer (5th MD), and Norton (DC). We were also fortunate to visit personally with Rep. Jerry Weller (11th IL).

Gender & ethnic diversity in environmental engineering

by Timothy M. LaPara, Sharon A. Jones, Alok Bhandari, Lee W. Clapp, and Donna E. Fennell

One of the activities defined as a "broader impact" by the National Science Foundation (NSF) is to "broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)." The Demographics and Diversity Committee, therefore, recently began a study of environmental engineering students, faculty, and practitioners to help identify and clarify which groups are underrepresented within our profession.

The first challenge faced by our committee was to find diversity data specific for the profession of environmental engineering. Because environmental engineering is interdisciplinary and/or often categorized as a sub-discipline of a more traditional branch of engineering (usually Civil Engineering), demographic and diversity data for environmental engineers are muddled. We have previously published our assessment of this problem in surveying environmental engineers (Jones et al. 2005. An initial effort to count environmental engineers in the USA. *Environmental Engineering Science* **22**(6):772-782.). To simplify our diversity study, therefore, we strictly focused on the data reported by the American Society for Engineering Education (ASEE), which are limited to those students receiving named environmental engineering degrees. The ASEE data are also limited to faculty within named environmental engineering departments. We also used NSF data for practitioners that includes those who self-report as environmental engineers regardless of their degree title.

Our survey revealed that environmental engineering has better gender diversity than the engineering discipline in general. More than 40% of the Bachelor of Science degrees in environmental engineering were awarded to women in 2003-2004, compared to 20% throughout engineering. A smaller fraction of the environmental engineering faculty are women (~15%), but this is more than double all engineering fields (7%). These numbers also extend to environmental engineering practitioners, where more than 20% of the workforce is occupied by women – about double the engineering average.

In contrast, the ethnic diversity of the environmental engineering profession is disappointingly low. African-Americans represent more than 12% of the general population but less than 3% of the degrees in environmental engineering (at all levels) are awarded to African-Americans each year. Hispanic-Americans receive 9% of the Bachelor of Science degrees, but less than 3% of the graduate degrees that are awarded to environmental engineering students. Native Americans, which comprise less than 1% of the total U.S. population, receive about 2% of the Bachelor of Science degrees awarded to environmental engineering students. In general, the percentage of environmental engineering degrees awarded to minority students in the U.S. is about the same (or less) than for all engineering fields.

In summary, our survey revealed encouraging information on gender diversity within environmental engineering, but it has also shown that ethnic diversity within environmental engineering could be improved. Our committee, therefore, plans to investigate the causes of the relatively low ethnic diversity within our profession as well as to identify novel approaches to help improve diversity within environmental engineering.

AEESP-Sponsored Events at WEFTEC 06

Note that this year there will again be reduced rates for AEESP members. The AEESP Web site has a special registration form posted (AEESP.org).

AEESP/WEF Scientists Luncheon

Monday October 23, 12:00 noon - 1:30 pm
Dallas Convention Center
Dr. Philip Bedient
Herman Brown Endowed Professor of Engineering
Rice University
"Predicting Severe Storms along the Texas Gulf Coast"

AEESP/WEF Lecture

Monday October 23, 1:30 to 2:30 pm
Dallas Convention Center
Dr. James L. Barnard
Global Technology and Practice Leader
Black & Veatch, Kansas City, Missouri
"Biological Nutrient Removal: Where We Have Been, Where We Are Going"

Meet & Greet Reception Awards Ceremony and AEESP Annual Meeting

Monday October 23, 5:00 to 7:00 pm
Hyatt Regency Hotel
Sponsored by Carollo Engineers

Newsletter policies

AEESP welcomes AEESP members to submit items such as letters to the editor, letters to the president, news, ads, and announcements to the Newsletter. The decision to publish is subject to the discretion of the Editor and the AEESP Board of Directors.

All submissions for the AEESP Newsletter should be sent electronically as an attached file to the Newsletter editor, Eric Marchand.

Submissions deadline

The AEESP Newsletter is published three times a year in January, April, and September. The deadline for Newsletter submissions is one month prior to the publication date (e.g., the deadline for the January Newsletter is December 1). Please keep in mind when submitting items with deadline dates that members receive issues four to six weeks after the submissions deadline.

Advertising policy

Any advertisement, including faculty, post-doc, or student ads, or other types of announcements submitted by an AEESP member, will be free for the first 250 words (approximately 1/4 page) and then charged at $1 per word for additional content, if formatted to fit in a column. Non-members will be charged at the per word rate for any size column-formatted ad. Full page formatted advertisements will be charged at $500 for members and $1,000 for non-members. All formatted full page ads will be accompanied by a free Web ad.

Photo submissions

Photo submissions to the AEESP Newsletter are encouraged. Please submit your photos electronically in jpeg format at the highest dimension for downsizing to print resolution (preferably less than 750 KB). Also, please include captions with names, locations, and dates.

Board highlights

submitted by James R. Mihelcic

The board met on August 18 and 19 in Chapel Hill, NC. The board discussed reports from the approximately 20 active committees that cover a wide spectrum of activities related to education, research, and outreach.

New board members are: Peter Adriaens, Angela Bielefeldt, and Keri Hornbuckle. Officers for the upcoming year are:

- President: Philip Singer
- President Elect: James Mihelcic
- Vice President: Amy Childress
- Treasurer: William Ball
- Secretary: Charles Werth
- Chief Information Officer: Menachem Elimelech

As of April 2006, the AEESP Foundation Inc. is now an official Illinois nonprofit organization. The Foundation is now applying for federal tax exempt status as a 501(c) (3) organization. Over the next year the Foundation will also be developing a Web page and strategic plan.

The Web site face lift is planned for the beginning of fall semester. We hope this will make the Web site more useful for members, their students, and individuals outside the organization.

The board approved creation of an ad-hoc committee on Global Sustainable Development that will develop a list of action items and an associated timeline for AEESP members interested in developing research, education, and scholarship related to this important subject.

Sharon Jones (Chair, Demographics and Diversity Committee) submitted her committee's preliminary findings on diversity in environmental engineering at this June's ASEE Conference. The Committee's report on counting the environmental engineering community is currently available on the Web site by clicking on "news."

We look forward to seeing you during the many activities we have sponsored at WEFTEC this October.

AEESP Education and Research Conference

July 28-August 1, 2007
Virginia Polytechnic Institute and State University

Plan to join your friends and colleagues July 28-August 1, 2007 for AEESP's next Education and Research Conference at Virginia Tech in Blacksburg, Virginia. The theme for the conference is, "Interactions at the Interface–Making a Connection Between Environments, Disciplines and Nations." The conference will consist of a fun networking day of tours or golf, a day for workshops, and two days for conference sessions. The eight sessions will be structured around large/small scale science and engineering topics, and large/small scale people-related topics. Arrangements have already been made for eight of the world's leading authorities (Alexander Zehnder, Cliff Davidson, Deb Niemeier, Susan Watson, Menachem Elimelech, George Ekama, Eberhard Morgenroth, and Amy Zander) to give plenary presentations. A Web site with more details about the program is currently being developed (www.cpe.vt.edu/aeesp), and a call for papers should be issued in October. Questions about registration and travel arrangements should be directed to Mrs. Holly McCall-Williams (hmccall@vt.edu; (540) 231-2188), whereas questions about the overall program should be directed to the conference chair, Dr. Gregory Boardman (gboard@vt.edu; (540) 231-1376).

Student Services Committee update

submitted by James D. Englehardt

For many years the AEESP Student Services Committee has grappled with the question of how best to facilitate professional society services for environmental engineering and science students, in light of the emergence of environmental engineering as a discipline unto itself. Previously, the Committee developed the Environmental Engineering Student Forum, a Web site intended to serve as a point of contact among students who might belong to any of a number of environmental engineering specialty societies, though visibility has not met expectations. In the fall of 2005, the Committee began to discuss options currently available for students in terms of professional societies. Because no professional society currently exists with a primary constituency in this field, a survey was prepared, to collect student input regarding needs that could be filled by a student organization and to assess the perceived need for a new society serving students. In December 2005 the survey was finalized, announced via the AEESP list-serve and the January AEESP newsletter, and made available online through the SurveyMonkey service.

Responders to the survey numbered 169 in total, 76% of whom reported being in a department of environmental, civil, or chemical engineering. Of the responders who answered each particular question, it was noteworthy that 90.3% reported interest in joining a Student Society for Environmental Engineering and Sciences (SSEES), 74.8% responded that they would attend an international meeting of all SSEES organizations, and 89.4% responded that they would see themselves as being involved in the SSEES after graduation. A more detailed summary analysis of the results is given in the Final Report, to be submitted to the AEESP board of directors in September. The Committee provided these results as a basis for discussion to the Joint Task Force of the American Academy of Environmental Engineers (AAEE) and the Association of Environmental Engineering and Science Professors (AEESP) on the Establishment of a Professional Society for Environmental Engineers, and is currently formulating a plan regarding expansion of professional society services to students. In addition, the Committee is helping organize the 4th IWA Young Water Professionals Conference, to be held July 16-18, 2008 at the University of California, Berkeley, co-sponsored by AEESP. The call for papers will go out in May 2007.

2006 Clarke Prize recipient advocates better science and policy to control disinfection byproducts in drinking water

The critical need to improve the ability to study, regulate, and implement better management strategies to control the formation of disinfection byproducts (DBPs) in drinking water was highlighted at the Thirteenth Annual Clarke Prize Award Ceremony and Lecture, held by National Water Research Institute (NWRI) on July 13, 2006.

The Clarke Prize was awarded to drinking water expert, **Philip C. Singer**, Ph.D., P.E., the Daniel A. Okun Distinguished Professor of Environmental Engineering at the University of North Carolina at Chapel Hill, for his groundbreaking efforts to understand the formation and control of DBPs in drinking water. As part of the award ceremony, Singer presented the 2006 Clarke Prize Lecture on improving science and policy related to DBPs to better protect public health.

Dr. Singer's suggestions in the Clarke 2006 Lecture included:

- Encouraging water supply researchers and practitioners to work together with health scientists on epidemiological studies to properly assess and characterize DBP exposure.
- Correcting the Stage 1 and Stage 2 DBP regulations by basing future DBP regulations on individual species rather than class sums.
- Better managing and controlling DBP formation in drinking water by removing natural organic matter prior to disinfection instead of using chloramines to control DBP formation.

Copies of the 2006 Clarke Lecture can be downloaded electronically from NWRI's Web site at www.nwri-usa.org.

Linda Abriola named to American Academy of Arts and Sciences

Linda M. Abriola, dean of the School of Engineering at Tufts University, was among nearly 200 leading scholars, scientists, artists, and world leaders named this year to the prestigious American Academy of Arts and Sciences. She is joined by a variety of distinguished national and international figures, including two former U.S. presidents, a Nobel laureate, and several Pulitzer Prize winners.

Abriola is one of the world's foremost researchers in the field of groundwater contamination and remediation. During her doctoral research, Abriola developed the first mathematical model that described how organic liquid contaminants migrate in the porous subsurface – work that is still frequently cited today. With her subsequent modeling investigations, Abriola has helped to inform and shape policy on subsurface remediation at the national level.

In 2003, she became the first woman dean of the School of Engineering at Tufts University. Prior to her arrival at Tufts University, Abriola spent 19 years as a professor at the University of Michigan's College of Engineering, where she was director of the Environmental and Water Resources Engineering Program and the first woman to be honored with a chair professorship.

She is a Fellow of the American Geophysical Union and a member of the National Academy of Engineering. Abriola earned her bachelor's degree from Drexel University and her master's and doctorate degrees from Princeton University.

Abriola will be formally inducted into the Academy of Arts and Sciences on Oct.7, at the organization's headquarters in Cambridge, Mass.

Wayne Echelberger receives Stanley E. Kappe Award

Dr. Wayne F. Echelberger, Jr., P.E., BCEE, Emeritus Professor of Civil and Environmental Engineering at the University of South Florida, received the 2006 Stanley E. Kappe Award from the American Academy of Environmental Engineers (AAEE). This award is presented to a Board Certified Environmental Engineer in recognition of the performance of extraordinary and outstanding service contributory to the advancement of Academy objectives. Dr. Echelberger is a past member of the AEESP board of directors (1970-73) and also served as the Association's Secretary/Treasurer (1971-73). The award was presented at the AAEE Awards Luncheon at the National Press Club in Washington, DC on May 3, 2006.

Bart Smets wins Marie Curie Excellence Grant

Barth F. Smets received a Marie Curie Excellence Grant, under the European Commision's 6th Framework Program. This award, totaling approximately 2 million Euro ($2.5 million U.S.), will allow him to launch a European level research team around the theme of microbial ecology with ramifications for environmental and public health.

Marie Curie Excellence Grants aim at providing support for the creation and development of European research teams considered to have the potential to reach a high level of excellence, more particularly for leading edge or interdis-

ciplinary research activities. An additional aim is to contribute to counteracting brain drain, especially by encouraging high potential researchers who are currently active in third countries to resume their careers and bring to bear their potential for excellence in Europe.

Marie Curie Excellence Grants are open to any scientific field, and in total 25 such grants have been awarded annually across the EU since their inception in 2003.

Dr. Smets is currently a professor of environmental microbiology and leader of the Microbial Ecology Research Group in the Institute of Environment & Resources at the Technical University of Denmark.

Daniel Giammar receives NSF CAREER Award

Daniel E. Giammar, assistant professor in the Environmental Engineering Science Program at Washington University in St. Louis, has received a National Science Foundation CAREER Award for research titled "Interfacial Reactions Affecting Heavy Metal Fate and Transport: An Integrated Research and Education Plan." The award will support Dr. Giammar's research on reactions at the solid-water interface that influence metal behavior in natural and engineered aquatic systems. In particular, the project will advance our understanding of processes that control the mobility of lead and uranium at contaminated sites. The research is integrated with educational outreach activities for local middle school students as well as innovations to the environmental engineering curriculum. Dr. Giammar is active in AEESP as a member of the Student Services Committee, and at Washington University he is the faculty advisor for the Environmental Engineering Student Association and Student Chapter of the Water Environment Federation.

Kalliat Valsaraj appointed Chair of Chemical Engineering at LSU

Kalliat T. Valsaraj, the Charles and Hilda Roddey Distinguished Professor in Chemical Engineering, has been appointed as the chair of the Cain Department of Chemical Engineering at Louisiana State University, Baton Rouge effective August 1, 2006. He has been serving as interim department chair since January 2005, when he succeeded Professor F. Carl Knopf who served for seven years as department chair.

Valsaraj received his Ph.D. from Vanderbilt University in 1983. His areas of specialization include applied surface chemistry, atmospheric chemistry, environmental engineering, and mass transfer separation process.

With over 20 years of service to the university, Professor Valsaraj has two books, 22 book chapters, two patents, and 135 refereed publications to his credit. In addition, he serves on the editorial review boards of *Environmental Monitoring and Assessment*, *Environmental Toxicology and Chemistry*, and the *Journal of the Air and Waste Management Association*.

Natalie Tufenkji receives AWWA academic achievement award

AEESP member **Nathalie Tufenkji** is the recipient of the 2006 First Place Academic Achievement Award from the American Water Works Association for best doctoral dissertation in the field of public water supply. The dissertation, entitled "Spatial Distributions of Retained Colloidal and Microbial Particles in Porous Media: Measurements, Modeling, and Mechanisms," was completed under the supervision of Dr. Menachem Elimelech, director of the Environmental Engineering Program at Yale University. Dr. Tufenkji is currently an assistant professor in the Department of Chemical Engineering at McGill University where she also holds a Canada Research Chair in Biocolloids and Surfaces.

Dr. Tufenkji's research group focuses on understanding the fundamental mechanisms controlling the interaction of biocolloids (including viruses, bacteria, and protozoa) and abiotic colloids with interfaces of environmental and biomedical interest. Current research efforts are aimed at evaluating the quantity and fate of microbial pathogens in the natural aqueous environment and improving our understanding of microbe interactions with petroleum hydrocarbons. Dr. Tufenkji serves on the AEESP Student Services Committee and is also a member of the American Chemical Society (ACS), Canadian Association for Water Quality (CAWQ), International Water Association (IWA), and Canadian Society for Chemical Engineers (CSChE). Nathalie Tufenkji can be contacted via her Web site at http://people.mcgill.ca/nathalie.tufenkji/.

Ramesh Goel joins the University of Utah

Ramesh K. Goel has recently joined the University of Utah's Civil & Environmental Engineering Department faculty as an assistant professor. Ramesh completed his Ph.D. in environmental engineering at the University of South Carolina with Dr. Joseph Flora. His doctoral research work involved bio-electrolytic groundwater remediation and nitrogen removal. Ramesh joined Dr. Daniel Noguera's research group at the University of Wisconsin as a research associate and conducted research on the microbiology of biological phosphorus removal systems, sludge minimization in activated sludge processes, heterotrophic bacterial biofilm formation and bacterial identification in drinking water distribution systems, and microbial fuel cells. Ramesh teaches Unit Operations, Advanced Bioprocesses and Introduction to Environmental Engineering (II). Ramesh's long-term research interests include studying the effect of different operational and environmental factors on biological phosphorus removal performance and microbiology, effects of subsurface geochemistry (especially iron chemistry) on DNAPL remediation, the fate of pharmaceutical and cosmetic waste in activated sludge processes, and thermophilic microbial fuel cells.

Three new faculty members join Michigan State University

In an expansion of the Environmental Engineering Program, three new faculty members have been appointed to the Department of Civil and Environmental Engineering at Michigan State University as assistant professors.

Alison M. Cupples earned her Ph.D. (2003) in Environmental Engineering and Science from Stanford University. She received her B.S. (1997) from the University of East Anglia, England, and her M.S. (1999) in Environmental Sciences from the University of Illinois. Before coming to MSU she was a postdoctoral fellow with the USDA-ARS at the University of Illinois, Urbana-Champaign. She is a member of the American Society for Microbiology and the American Society of Agronomy. Her primary research interests include the biological degradation of environmental contaminants. She is especially interested in using quantitative molecular methods to investigate the in situ transformation of these compounds. Her teaching activities will center around environmental microbiology.

Birnur Guven received a B.S. (1997) in Mathematics and M.S. (2001) in Environmental Sciences from Bogazici University, Turkey and M.S. (2003) and Ph.D. (2006) in Environmental Engineering from Rice University. Her research interests include the areas of multivariate statistical methods for data analysis, characterization of source/receptor relationships for ambient air pollutants, air quality modeling, measurement of atmospheric pollutants, and emission inventory assessment. The overall goal of her research is to understand the origin of air pollutants and their influence on human health, and how effective control plans can be improved to reduce the adverse effects of air pollution. She will be teaching in the area of air quality.

Irene Xagoraraki earned her Ph.D. (2001) and M.S. (1995) in Civil and Environmental Engineering from the University of Wisconsin-Madison and her B.S. degree (1993) from the University of the Aegean in Greece. Before coming to MSU she held a postdoctoral position at the University of Wisconsin-Madison. Her research interests include drinking water safety, public health, and water quality engineering, with a particular focus on the detection, removal, and inactivation of emerging biological and chemical contaminants in drinking water. Her recent research includes: disinfection of enteric viruses in municipal groundwater systems, inactivation of cyanobacterial toxins by free chlorine, emerging pathogen removal in conventional water treatment processes, and coagulation and sedimentation of *Cryptosporidium parvum*. The focus of her teaching will be water quality engineering.

AEESP Member News

News items about AEESP members may be submitted for publication in the 'Member News' section by sending them to: Eric Marchand, AEESP Newsletter Editor, marchand@unr.edu.

Member News

University of South Carolina

Gene McCall practices environmental law in Greenville, SC. He recently was a parent chaperone for the South Carolina Governor's School for Science and Math's Interim Session Wildlife Photography class to the Galapagos Islands. He is a contributing author to the book, *Environmental Law in South Carolina* (2nd Edition), published July 2006 by the South Carolina Bar. Gene was an Assistant Professor of Civil Engineering and Adjunct Assistant Professor in the School of Public Health from 1984-1988 at the University of South Carolina; since 2005, he's returned to USC part time as an Adjunct Professor of Law where he teaches the water quality section of the South Carolina Environmental Law Seminar.

Bill Cooper joins the University of California, Irvine

William J. "Bill" Cooper has been appointed director of the Urban Water Research Center and professor of civil and environmental engineering at the University of California, Irvine. As a civilian working for the U.S. Army at Ft. Detrick in the late 1970s, Cooper ran the water reuse program. His program partially supported the first annual Water Reuse Symposium in 1979. Through the 80s and 90s, Cooper served as director of the Drinking Water Research Center at Florida International University, Miami, Florida, and as associate professor in the Department of Chemistry. In 1997, he was appointed chair of the Department of Chemistry at the University of North Carolina, Wilmington, and for the last six years has been at the Center for Marine Science. His research interests have been in analytical chemistry of chlorine residuals, disinfection byproducts, and trace organics analysis. More recently, Cooper has focused on carbon cycling in coastal oceans and the application of free radical chemistry in advanced oxidation processes (AOPs). As a result of his experience in free radical chemistry, he serves as a consultant to the International Atomic Energy Agency and is involved in several international cooperative research projects. Most recently, he has been involved in the application of ozonation for ballast water treatment at full-scale on oil tankers. Cooper will continue his studies at UCI in reaction rates and destruction mechanisms, and kinetic models for optimizing AOPs.

Treavor Kendall joins Clemson University

Dr. Treavor A. Kendall joined the faculty of the School of the Environment at Clemson University as an Assistant Professor in August 2006. Dr. Kendall is an environmental geochemist interested in the chemical dynamics of mineral surfaces in contact with aqueous solutions, organics, and biological materials. After earning a B.S. at the University of Texas at Austin and a M.S. at the University of Montana, he received a Ph.D. at Virginia Tech in Michael Hochella's mineral surface chemistry group. Dr. Kendall next worked as a postdoctoral fellow at Harvard University, where he broadened his expertise to include the examination of carbonate surfaces under subaqueous and aqueous conditions using various forms of electrical force microscopy. At Clemson University, Dr. Kendall plans to focus on connecting nanometer and molecular scale observations with large scale applications. A primary goal of his lab will be to train the next-generation geoscientists in the advanced techniques required to understand the complex heterogeneity of near-surface environmental systems. When not in the lab or classroom, Dr. Kendall likes most things out of doors, including hiking, running, and cycling. He also loves to draw.

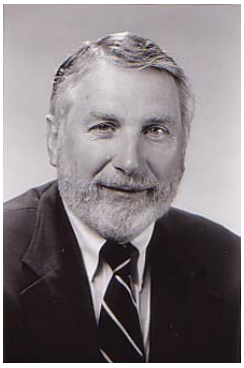
Michael Aitken appointed chair at UNC

Michael D. Aitken, Ph.D., has been appointed chair of the Department of Environmental Sciences and Engineering in the School of Public Health at the University of North Carolina at Chapel Hill. Aitken's appointment was effective September 1, 2006. Aitken, a professor in the Department of Environmental Sciences and Engineering and director of the Department's Environmental Engineering Program, received his doctorate in civil engineering from the University of Notre Dame in 1988. After having joined the School's faculty as an instructor in 1987, Aitken became assistant professor in 1988, associate professor in 1995, and professor in 2000. Prior to his academic career, he worked as a consulting environmental engineer at Malcolm Pirnie, a major international environmental engineering company. Aitken is a former president of AEESP.

Pratim Biswas elected president of AAAR

Pratim Biswas, director of the Environmental Engineering Science Program and the Stifel and Quinette Jens Professor of Environmental Engineering Science at Washington University in St. Louis, was elected to be the 2006-2007 president of the American Association of Aerosol Research. Dr. Biswas was also a co-chair of the Technical Program Committee for the 7th International Aerosol Conference (IAC), which was held September 10-15, 2006, in St. Paul, Minnesota.

The History and Significance of Tenure



by P. Aarne Vesilind, Bucknell University

Although few issues are as important to younger faculty as attaining tenure, not many of them will be able to find mentors who can explain what tenure means, why it exists, what the rules are, and how it got started.

Most faculty believe that the main purpose of tenure is to assure academic freedom, but academic freedom is not an inalienable right. During the 19th century, little academic freedom existed in American universities and firing faculty for speaking out on issues such as slavery or Darwinism was common. By the beginning of the 20th century the notion of academic freedom had begun to seep into universities and several landmark cases became famous, not the least of which was the Bassett affair at Trinity College, a Methodist-supported teachers college (now Duke University) in segregationist North Carolina.

In 1900, John Spencer Bassett was a 36-year-old English professor at Trinity College. Although he was born and raised in eastern North Carolina he believed that segregationist politicians in the South exploited the race issue for political gain and that the disfranchisement of blacks hurt the progress of the South. He called for a spirit of reconciliation between the races in the literary journal *South Atlantic Quarterly*. The most famous phrase out of the article, which his critics used unmercifully against him, was the claim that "...[Booker T.] Washington is a great man...and take him all in all the greatest man, save General Lee, born in the South in a hundred years...."

The establishment reaction was swift and vicious. Josephus Daniels, the powerful Democratic editor of the Raleigh *News and Observer* thundered in editorials against Bassett, calling for his dismissal. Most newspapers in North Carolina soon joined the chorus. The businessmen and Methodist ministers who made up the Trinity College board of trustees faced immense pressure to fire Bassett.

Fortunately, the president of Trinity College was John Kilgo, a Methodist minister and fighter for social causes. He rallied the faculty and students at Trinity College and convinced several influential trustees such as Benjamin Duke that academic freedom deserved protection. In a fateful meeting of the board of trustees the vote was 18 to 7 to support Bassett, a decision that made national news and boosted the reputation of Trinity College. The affair set a precedent for other universities and made academic freedom a core value in university life.

But not all academic freedom cases were either as clean cut or resulted in similar action. Emory College in Atlanta, in 1899, dismissed a professor who published an article in the *Atlantic Monthly* attacking the brutality of whites against blacks. In 1900, at Stanford University, Professor Edward Ross was fired from the faculty ostensibly for his outspoken and unorthodox views on economics. Ross was a distinguished economist who supported William Jennings Bryant and the Free Silver Movement. Jane Stanford, chair of the board of trustees, asked President David Starr Jordan to fire Ross and eventually the president did so. It was well known that Jane Stanford was opposed to the populist views of Ross and it was assumed that this was the cause for the firing. What is not so widely known is that Ross had also made some incredibly insensitive racist remarks about Asian immigration, at a time Stanford was trying to provide educational opportunities for Asian immigrants. Possibly the firing was more for the "hate speech" than for his economic views.

Tenure as we now know it was originally established at the University of Wisconsin in the early 1900s. Wisconsin was a hotbed of progressive ideas and professors speaking radical thoughts believed they needed the protection of the university. The fledgling Association of American University Professors (AAUP), formed in 1915 by a number of prominent faculty from sixty institutions, quickly became involved in the defense of academic freedom and its first published work was the 1915 Declaration of Principles by the AAUP Committee on Academic Freedom and Academic Tenure. This AAUP document is still the operative statement on tenure and is respected by most universities even though the document has no legal standing.

Competitive pressures for hiring the best professors caused most universities to accept the AAUP definition voluntarily and to adopt a system for tenuring faculty, a system that has changed little over the past 65 years. Basically, the university agrees to provide a lifetime job for the faculty as long as the members adhere to a code of conduct that includes doing their job (teaching classes) and being morally upright. Morality used to mean exclusively sexual morality, but in the last few years professors have lost their jobs for getting caught committing petty crimes. Universities actually have a number of ways of dismissing tenured professors, the most drastic being by dissolving the department or school, thereby revoking all tenure. Such was the case recently at Tulane University. Tenure therefore should not be thought of as a lifetime contract as much as it is a simple agreement of good will between the faculty and the university.

While tenure has many benefits, the system also has some detractors who believe that tenure does not accomplish its aims – to guarantee academic freedom – or if it does, it is at too great a cost. They point to flourishing academic freedom at universities that have abolished tenure, and note that some universities that ostensibly support academic freedom nevertheless severely restrict the rights of tenured faculty on religious or political grounds. They also argue that all of our untenured faculty members (usually assistant professors) do not, by definition, have the protection of tenure and that the system ironically creates a class of fac-

ulty who, while they are seeking tenure, are most vulnerable to having their views and opinions held against them.

They also argue that the tenure system, instead of enhancing faculty quality, may actually be counterproductive. There is no doubt that some of our best teachers are denied tenure because they are not sufficiently productive in research or scholarship, and for many recent Ph.D. graduates the thought of going through an up-or-out tenure process is not an inducement when they begin searching for academic jobs. They watch what happens at their own departments and conclude that the process of tenuring is often cruel, dehumanizing, and unnecessary. As a result, some choose a non-academic career, while others are pleased to find universities where tenure is not granted, or that base tenure decisions more on teaching than research. My experience has been that these young people have a keen sense of their own worth but choose not to play the tenure game, shying away from universities that have cutthroat tenure policies and a poor record of retainment. The argument, therefore, that tenure enhances the quality of our faculty may be hollow.

Finally, the detractors point out that the tenure system has been used by lazy or unethical senior faculty to provide a secure income while they pursue outside interests. While some outside work can be useful if brought to the classroom or research laboratory, often these interests have little to do with their scholarly field. Such faculty also tend to be the most adamant supporters of the tenure system.

Should tenure then be retained in its present form, modified to get rid of some of the disadvantages, or eliminated entirely? Perhaps you have strong feelings. Feedback would be cherished. Please let me know at vesilind@bucknell.edu.

News submissions deadline

The submissions deadline for the January 2007 AEESP Newsletter is **December 1, 2006.** Send news items to:
Eric Marchand
AEESP Newsletter Editor
marchand@unr.edu

UCLA

POSTDOCTORAL POSITION IN MEMBRANE SCIENCE AT UCLA. The Department of Civil and Environmental Engineering at the University of California, Los Angeles (UCLA) is seeking a postdoctoral researcher to work in the area of reverse osmosis (RO) membrane development and testing. The principal responsibilities of the postdoctoral researcher will be to: (1) characterize physicochemical properties of commercial and synthesized RO membranes, (2) design and conduct bench-scale performance studies to evaluate water permeability, solute rejection, and fouling resistance of membranes, (3) coordinate, monitor, and analyze results of several field evaluations of commercial and synthesized RO membranes, (4) help mentor Ph.D. students, (5) apply for and manage new research projects, and (6) manage and maintain a water quality research laboratory.

Applicants should have a Ph.D. in Environmental, Civil, or Chemical Engineering or Chemistry and have research experience in membrane science including preparation methodologies, characterization techniques, performance testing, and applications. Applicants should also have excellent organization, communication, and team-working skills.

Review of applications will begin immediately and will continue until the position is filled. Interested candidates should send a cover letter highlighting their relevant experience and research interests, curriculum vitae, a list of three references, and copies of 1 or 2 publications to: Eric M.V. Hoek, Assistant Professor, Civil & Environmental Engineering Department, 5732G Boelter Hall, PO Box 951593, University of California, Los Angeles, Los Angeles, CA 90095-1593, hoek@seas.ucla.edu.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants are encouraged to apply, including minorities and women. Salary of the successful applicant will be commensurate with experience.

SENIOR FACULTY POSITION IN CIVIL AND ENVIRONMENTAL ENGINEERING AT UCLA. The UCLA Civil and Environmental Engineering Department invites applicants for a senior (full professor) tenure-track position starting in January 2007. The successful candidate must hold an earned doctoral degree in an appropriate field, will teach graduate and undergraduate courses, and will be expected to develop and sustain an extramurally sponsored research program. Research areas of particular interest include Advanced Materials, Environmental Biotechnology, and Sensor Technology. In the area of Advanced Materials we are seeking a candidate to enable revolutionary advances in infrastructure, including mechanics and design of micro/nano structured materials for engineering structures, smart/active materials for failure and performance-based assessment for systems subjected to extreme conditions, constitutive characterization of new nano construction materials, and analysis of material microstructures and their connection to nano-, meso-, and macro-scale structural behavior. The area of Environmental Biotechnology here is defined as encompassing all aspects of applying biological methods for characterization of engineered and natural systems, treatment/reclamation of impaired waters and wastewater, and remediation of contaminated sites. We are interested in an individual with strong expertise in genetic/molecular techniques that can be applied to development of chemical and biological sensors and/or alternative/renewable energy in combination with application to conventional aspects of biological treatment of water, soil, and air. The Sensor Technology area realizes the critical need in health monitoring and sensor networks applicable to infrastructure and environmental systems, particularly for protection due to extreme events. We are interested in recruiting

faculty to complement the existing strengths in the department to develop sensor technology applicable to optimal networking and data collection in the field and for infrastructure subjected to natural and other hazards, as well as for monitoring environmental contamination and geochemical processes. Each of the areas emphasized in this search requires multi-disciplinary collaboration between civil and environmental engineers and specialists in disciplines such as bioengineering, materials science, computer science, electrical engineering, nanotechnology, earth & space sciences, and other disciplines. We are specifically seeking candidates who can collaborate effectively with existing UCLA faculty to address today's challenging research problems.

Applicants should send a detailed curriculum vitae and the names and addresses of at least four references to: Professor William Yeh, Chair, Civil and Environmental Engineering Department, 5732 Boelter Hall, University of California, Los Angeles, CA 90095-1593. E-mail inquiries may be addressed to Professor Keith Stolzenbach at stolzenb@ucla.edu. Information on the department can be found at www.cee.ucla.edu. Review of applicants will begin immediately and continue until the position is filled.

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants are encouraged to apply, including minorities and women. Salary of the successful applicant will be commensurate with experience.

University of Hawaii

ASSOCIATE/FULL PROFESSOR IN BIOLOGICAL ENGINEERING, UNIV. HAWAII, TENURE TRACK. Provide strong leadership in the Biological Engineering instructional program and in ABET accreditation, teach senior capstone design and other undergraduate courses, and establish a high-quality research program in Bioprocess Engineering. Ph.D. in biologically related engineering discipline. To apply: Send cover letter, CV, statement of research and teaching interests, five representative reprints, and contact information of three references to: Search Committee Chair, Department of Molecular Biosciences & Bioengineering, University of Hawaii at Manoa, 1955 East West Rd, Honolulu, HI 96822. Inquiries: (808) 956-8384. Further information on the position can be viewed at http://www.ctahr.hawaii.edu/mbbe/job/.

University of Texas at Austin

The University of Texas at Austin (UT) announces a new graduate program in Indoor Environmental Science and Engineering funded through the National Science Foundation's IGERT program. We are seeking highly motivated and qualified graduate students who are committed to completion of a Ph.D. degree and desire to become international leaders in this emerging and important field.

Indoor environmental science and engineering involves the connectivity between outdoor and indoor environments, sources of indoor pollution, pollutant sinks and transformation mechanisms (physical, chemical, and biological), and exposure to, and impacts of, indoor pollutants. These processes and outcomes are linked closely to building design and energy usage, and have significant human dimensions, including psychological perceptions, economic impacts and drivers, risk communication, policy development, legal implications, and cultural trends.

IGERT trainees will participate in a unique, multi-component educational program. Trainees will complete research as members of interdisciplinary teams, an internship at one of several internationally-recognized research institutions, courses designed to establish both technical depth and breadth of knowledge, and public outreach and mentoring experiences.

Trainees will receive two years of stipend at $30,500/year and tuition and fees. Qualified students in engineering disciplines will receive an additional $8,000/year.

Applicants must be citizens or permanent residents of the United States and must concurrently apply to a participating department/school at UT (architecture, economics, engineering [chemical, civil/architectural/environmental, mechanical], microbiology, psychology, or toxicology). Students from historically underrepresented groups in science and engineering are encouraged to apply.

For additional information see www.caee.utexas.edu/igert or contact Professor Richard L. Corsi at (512) 475-8617 or corsi@mail.utexas.edu.

Positive outlook for environmental engineering

Environmental engineers should have favorable job opportunities. Employment of environmental engineers is expected to increase *much faster than the average* (defined as an employment increase of 27% or more) for all occupations through 2014. More environmental engineers will be needed to comply with environmental regulations and to develop methods of cleaning up existing hazards. A shift in emphasis toward preventing problems rather than controlling those that already exist, as well as increasing public health concerns, also will spur demand for environmental engineers. Even though employment of environmental engineers should be less affected by economic conditions than that of most other types of engineers, a significant economic downturn could reduce the emphasis on environmental protection, reducing environmental engineers' job opportunities.

Source: Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition*, Engineers, on the Internet at http://www.bls.gov/oco/ocos027.htm (visited September 01, 2006).

Conferences

1st Water Quality, Drought, Human Health & Engineering Conference

October 18-20, 2006
Las Vegas, Nevada
www.asmeconferences.org/water06

The purpose of the conference is to provide a solutions-based forum and to exchange information regarding activities and plans for improving the quantity and quality of water, the impact on human health and engineering, and current policies from state and federal agencies. Attendees will include scientists and engineers, managers, legislators, and policy makers responsible for issues dealing with water. It is the intent of this conference to bring forward the concerns and impending problems (and offer solutions) that are developing with regard to the availability and quality of water, and the consequences to human health, not only in the southwest U.S., but also nationally and internationally.

A series of keynote talks will be given by invited experts, followed with panel discussions aimed at developing possible scenarios for solutions to many of these major water issues.

For further information contact Brandy Smith at smithb@asme.org.

Workshop on Environmental Engineering Education

January 8-10, 2007
Arizona State University

A NSF-funded workshop on environmental engineering education, co-sponsored by AEESP and AAEE, will be held on the campus of Arizona State University January 8-10, 2007. The workshop will evaluate current practices, explore recent innovations and developments, and assess future needs in environmental engineering curriculum and education. A major objective of the workshop is to define a core body of knowledge that can be used as a guide for developing curricula. This will be done by comparing curriculum content, delivery, and educational goals among undergraduate and graduate environmental engineering programs, and by integrating input from practitioners regarding the body of knowledge needed to practice environmental engineering. We will also explore new curricular and educational opportunities that can be exploited to invigorate curricula and attract students to our field. The workshop will enhance the infrastructure for education by strengthening environmental engineering curricula and fostering new networks and partnerships among faculty and stakeholders from industry, government, and professional organizations. We seek attendees representing a broad cross-section of environmental engineering education and practice. Limited funds will be available to defray travel costs. For more information, please contact Chip Kilduff (kilduff@rpi.edu).

Engineering Sustainability 2007: Innovations that Span Boundaries

April 15-18, 2007
University of Pittsburgh
Pittsburgh, Pennsylvania

Sponsored by: The Mascaro Sustainability Initiative (MSI) at the University of Pittsburgh. An initiative created to promote and support interdisciplinary research and education programs that focus on green construction and the sustainable use of water.

Collaborative Partner: The Steinbrenner Institute for Environmental Education and Research, Carnegie Mellon University

Engineering Sustainability 2007 aims to bring together scientists and engineers to present cutting edge results on technological advances in sustainable engineering. Check the MSI Web site for the call for papers and other conference details: http://www.engr.pitt.edu/msi/2007conference/confmain.htm. Abstracts are due October 20, 2006.

Contact Information: Gena Kovalcik, Co-director, MSI, University of Pittsburgh School of Engineering, 1140 Benedum Hall, Pittsburgh, PA 15261; Ph: (412) 624-9698; Fax: (412) 624-7820; E-mail: msi@engr.pitt.edu.

Center for Sustainable Engineering Workshops

July 15-17 and 18-20, 2007
Austin, Texas

The second annual workshops on teaching sustainability concepts in engineering curricula will be offered by the Center for Sustainable Engineering in Austin, Texas during the summer of 2007. Two identical workshops will be held on July 15-17 and July 18-20, 2007. The Center for Sustainable Engineering is a partnership of Carnegie Mellon University, University of Texas at Austin, and Arizona State University. The workshops are open to educators interested in teaching sustainable engineering in courses at their home institutions.

Each workshop will accommodate 30 participants. All tenure-track faculty members from engineering departments at four-year colleges and universities in the U.S., who are U.S. citizens or permanent residents and did not participate in previous CSE workshops, are eligible to apply. Participants will be chosen based on a competitive application process. Criteria for selection include a demonstrated interest in sustainable engineering, leadership in outstanding research, evidence of excellence in teaching undergraduate and/or graduate engineering courses, agreement that the individual will contribute at least one set of materials to the CSE Educational Materials Web site within a year of the workshop date, and likelihood that the workshop will result in substantial changes to courses at the home institution. Priority will be given to untenured faculty

members. Participants are expected to pay their own travel costs to the workshop and attend all activities for the full period of the workshop. NSF will cover the expenses of the workshop, including food, lodging, and workshop materials. For further information, see http://www.csengin.org.

5th International Conference on Flotation-IWA

September 11-14, 2007
Seoul, South Korea

The 5th International Conference on Flotation-IWA will be held in Seoul, South Korea on September 11-14, 2007. The conference program will include oral presentations and posters that cover a wide range of topics including, but not limited to, the following: (1) fundamental and applied research, (2) developments in flotation equipment technology, (3) developments in design and operation, (4) drinking water treatment applications, (5) municipal wastewater treatment applications, (6) industrial treatment applications, (7) water reclamation, (8) algae separation in lakes and oceans, and (9) sludge thickening. The due date for submission of abstracts is October 31, 2006. For additional information, please contact James Edzwald (edzwald@ecs.umass.edu) or see the Web site: www.flotation2007.org.

Call for Papers
Chemistry for a Sustainable Water Supply Theme

233rd American Chemical Society (ACS) National Meeting
March 25-29, 2007
Chicago, Illinois

Co-sponsored by:
ACS Division of Environmental Chemistry
Association of Environmental Engineering and Science Professors (AEESP)
NSF Science and Technology Center of Advanced Materials for the Purification of Water with Systems (WaterCAMPWS)

Abstract submissions are invited for the following eight ACS symposia planned as part of the *Chemistry for a Sustainable Water Supply* theme for the ACS National Meeting in Chicago on March 25-29, 2007.

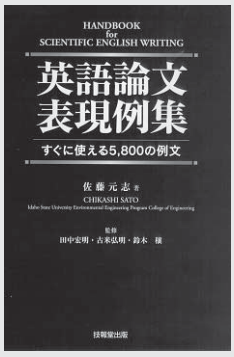
- **Occurrence, Formation, Health Effects and Control of Disinfection By-Products in Drinking Water Symposium**
- **Membrane Technology for Water Reuse Symposium**
- **Adsorption Processes for Drinking Water Treatment Symposium**
- **Catalytic Control of Emerging Micropollutants Symposium**
- **Advances in Desalination of Sea and Brackish Water Symposium**
- **How Pure is Our Drinking Water: Advances in Detection and Quantitation of Water Contaminants Symposium (also co-sponsored by the ACS Analytical Chemistry Division)**
- **Advances in Drinking Water Disinfection Processes Symposium**
- **Advances in Oxidation Processes for Water Treatment Symposium**

Abstract Submission

Presenters are required to submit a short abstract to the ACS by November 10, 2006 using the ACS online system (OASYS) at http://oasys.acs.org/oasys.htm and click on the SUST theme (abstract submission start date: August 28, 2006). The ACS Division of Environmental Chemistry also requires an extended abstract of two or more pages that must be submitted to the symposium organizer by November 17, 2006 using the instructions posted on the Web at http://envirofacs.org. The organizer prefers to receive extended abstracts as attachments to e-mail in MS Word or RTF file formats. Please label the extended abstract file with the ACS abstract number and first author's last name. More information on the individual symposia and organizer contact information can be found on the AEESP Web site at http://www.aeesp.org/news/news.php#Conferences.

Handbook for Scientific English Writing

Author: Chikashi Sato, Idaho State University
Editors: Hiroaki Tanaka, Kyoto University;
Hiroaki Furumai, University of Tokyo;
Yutaka Suzuki, PWRI
Publisher: Gihodoshuppan, Tokyo, Japan
www.gihodoshuppan.co.jp/newbooks/index.html
ISBN: 4-7655-3011-6
856 pages
Publication Date: June 2006



This book:

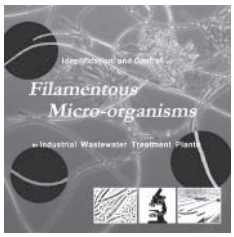
- Lists 5,800 useful scientific English expressions in environmental science and engineering.
- Consists of three levels: entry word; key phrases; and example sentences. The entry words are listed in alphabetical order.
- Includes Japanese translations and Japanese to English index.

IWA Publishing

New from IWA Publishing

Identification and Control of Filamentous Micro-organisms in Industrial Wastewater Treatment Plants

Multi-Media Training CD
Author: Dick Eikelboom



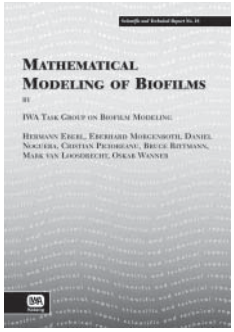
This CD presents completely new information on filamentous populations, responsible for poor settling sludge (bulking) in industrial wastewater treatment plants (WTPs). The results presented are based on a six-year EU-sponsored research program carried out by a consortium comprising Dutch, Italian, Danish and German partners. The research program included approximately 200 treatment plants, covering a wide range of industrial sectors.

It has been established that the filamentous populations in industrial WTPs differ significantly from those in domestic wastewater treatment plants. Based on conventional and FISH analysis about 50 unknown filamentous species have been identified and described. Many new gene probes were developed to enable the fluorescent in situ identification of frequently occurring species. Over 120 minutes of audio recording is supported by extensive photographs, videos, animations, and tables with over 1,000 illustrations.

ISBN: 1843390965, July 2006, CD-ROM
Full Price: U.S.$670.00 / £335.00
http://www.iwapublishing.com/template.cfm?name=isbn1843390965

Mathematical Modeling of Biofilms

Author: IWA Task Group on Biofilm Modeling



This report provides guidelines for the selection and use of mathematical models of biofilms. The whole range of existing models – from simple analytical expressions to complex numerical models – is covered. The application of the models for the solution of typical problems is demonstrated, and the performance of the models is tested in comparative studies.

With the dramatic evolution of the computational capacity still going on, modeling tools for research and practice will become more and more significant in the next few years. This report provides the foundation to understand the models and to select the most appropriate one for a given use.

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NOTE: The AEESP membership application is also available online at **http://www.aeesp.org/org/membership.html**.

Application for Membership

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

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

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

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

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

Please send submissions and comments to: Eric Marchand, AEESP Newsletter Editor, University of Nevada, Reno, Civil & Environmental Engineering MS 258, Reno, NV 89557-0152; phone: (775) 784-6817; fax: (775) 784-1390; e-mail: marchand@unr.edu. To estimate the amount of lead time needed for your announcement, please note that members receive the newsletter 4-6 weeks after the submissions deadline.

Please send address changes to: Joanne Fetzner, AEESP Business Office, 2303 Naples Court, Champaign, IL 61822; phone: (217) 398-6969; fax: (217) 355-9232; e-mail: jfetzner@uiuc.edu.

Publications designer: Cindy Lawrence, cindyl@turbonet.com.

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