AEESP Newsletter
Association of Environmental Engineering and Science Professors

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In this issue...

New Editor...

Beginning with the April 2006 issue, **Prof. Eric Marchand** of the University of Nevada, Reno will become the editor of the AEESP Newsletter. All submissions should be sent to Eric at marchand@unr.edu. Eric can also be reached at 775-784-6817.

A Water and Health Initiative is needed

I did a Google search the other day for "boil water," and besides some great cooking ideas which showed up (Sugary Pecan Punch Packed in Pralines YUM! After all it was the holiday season), about 1/3 of the 1540 stories were about communities and their drinking water. My head spun as the issuance of boil orders streamed across my computer screen and that was only for the last few months! Live Oak Springs in San Diego, the story told of a woman ill for three months. Mount Vernon, Ohio; Crab Orchard, Kentucky; Senantobia, Mississippi; Newport, Pennsylvania; Belle Glades, Florida; and Cornwall, New York. "Don't use tap water for infants," screamed out one headline (Westminster, Maryland). In Mooringsport, Louisiana, the story told of an owner of a restaurant facing a financial crisis due to the need to boil water. In Canada, there have been up to 43 boil orders in one province, and a health crisis due to the long standing boil advisory was discussed in Kashechewan. In Piermont, New York, daily bottled water sales were up more than the weekly sales before the "water event."

Now we know that the American Society of Civil Engineering has given the U.S. a D (not a very good grade) for its drinking water and wastewater infrastructure. In Mississippi and Louisiana, their vulnerability was shown off to the world after Katrina and Rita blew into town. Sewage was the talk of the town. Even this last summer as I enjoyed the beautiful beaches along Michigan's expansive coastline, I was aware that beach closures and advisories had gone up 134% from 2003 to 2004. We, as environmental scientists and engineers, are partly to blame for this seemingly silent erosion of water safety. We must speak out more loudly and consistently about water quality, water infrastructure and our health, not just our physical health but our quality of life and economic vitality of our communities.

I have to say I was "moved to tears" by the testimonials from the residents of Walkerton, Ontario, Canada, who five years after the outbreak were still suffering chronic symptoms associated with the contamination of their water supply. I wondered about the almost 2000 people who had gotten sick at South Bass Island, Ohio (2004) and whether anyone cared that some of these people may have chronic problems as a result of their vacation at Put-In-Bay. I thought about the surfers in California who constantly complain about illness, but no one listens (after all, they are surfers).

"We should be at the forefront of identifying and solving our water problems...."

We need to speak up, speak to those we have elected, those who are in charge of our community waters, those educated and experienced in water. We need a national initiative in Water and Health in the U.S. I would propose that we begin to work on The U.S. Water and Health Initiative. In my mind this would include at least:

1. A waterborne disease registry (where anyone who has experienced illness or symptoms due to exposure to contaminated water could be registered). This should be more comprehensive than the current passive "outbreak" database, would have more national coverage, and be a continuum in time (helping to record incidences more accurately and the longer term consequences).
2. Water quality monitoring and reporting database using geospatial approaches.
3. A comprehensive program addressing on-site wastewater, community wastewater,

Newsletter submissions

Submissions may be sent electronically to:
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animal wastes, and water quality.

4. Research and development of programs into tools/methods, technology, models, and adaptive management strategies for addressing the watershed to the tap.

We should be at the forefront of identifying and solving our water problems and as a consequence, become true global leaders addressing the global water crisis. Many of you already are and I am overwhelmed by the dedication of this group to the environmental and ecological health of our planet. But together, we can have a collective, louder, and stronger voice.

Joan B. Rose, Ph.D.
Director of the Center for Water Sciences
Homer Nowlin Chair for Water Research
Michigan State University

2005 AEESP Award Winners

The following awards were presented by AEESP President Pedro Alvarez at the 2005 AEESP Conference:

2005 Founders' Award

For Sustained and Outstanding Contributions to Environmental Engineering Education:
Richard E. Speece

2005 Outstanding Publication Award

"The (Relative) Insignificance of G in Flocculation" (1992) J. AWWA, 84(10):79-91.

Mooyoung Han and Desmond F. Lawler

2005-2006 Distinguished Lecturer

René P. Schwarzenbach, Federal Institute of Technology (ETHZ) in Zurich, Switzerland

Distinguished Service Awards

Shankar Chellam – In appreciation for distinguished service as Chair of the AEESP Masters Thesis Award Subcommittee

Mirat D. Gurol – In appreciation for distinguished service as Chair of the AEESP Awards Committee

Paul T. Imhoff – In appreciation for distinguished service as Chair of the AEESP Doctoral Dissertation Award Subcommittee

Joan B. Rose – In appreciation for distinguished service as AEESP Board Member

Malcolm Pirnie/AEESP Frontiers in Research Award

For advancing the environmental engineering and science field through recognized research leadership and pioneering efforts in a new and innovative research area:

Paul L. Bishop

CH2M Hill/AEESP Outstanding Doctoral Dissertation Award

"The Competition between Polyphosphate Accumulating Organisms and Glycogen Accumulating Organisms in the Enhanced Biological Phosphorus Removal Process"

Adrian Oehmen

Advisors: Zhiguo Yuan and Jürg Keller, University of Queensland

Parsons Corporation/AEESP Outstanding Doctoral Dissertation Award

"In Situ Stabilization of Persistent Organic Contaminants in Marine Sediments"

John R. Zimmerman

Advisor: Richard Luthy, Stanford University

Montgomery-Watson-Harza/AEESP Master's Thesis Awards

First Place: "Degradation and Sorption of Tylosin in Swine Manure Lagoons"

Angela C. Kolz

Advisors: Say Kee Ong and Thomas B. Moorman, Iowa State University

Second Place: "Uranium Complexation with Humic Substances: An Experimental

Adrian Oehmen (student) and Zhiguo Yuan (advisor), recipients of the CH2M Hill/ AEESP Outstanding Doctoral Dissertation Award, with Phil Singer (center).

Say Kee Ong (advisor) and Angela Kolz (student), recipients of the AEESP/ MWH Master's Thesis Award, with MWH's Rudy Tekippe. (Pedro Alvarez in background.)

Richard Speece, recipient of the Founders' Award, with Pedro Alvarez (left) and Phil Singer (right).

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.

Study and Modeling Review"
Rachel A. Kirkham
Advisor: Brian A. Dempsey, Pennsylvania State University

2006 Award nomination opportunities

AEESP Founders' Award

This award is given annually to recognize an AEESP member who has made "sustained and outstanding contributions to environmental engineering education and practice." Nominations for the 2006 AEESP Founders' Award must be sent before March 15, 2006 to the chair of the awards committee: Nancy G. Love, Department of Civil and Environmental Engineering, 418 Durham Hall (0246), Virginia Tech, Blacksburg, VA 24061. Supporting documentation of nominations is not required at the time of nomination, but successful nominations will be those that either include such information or provide the name of an appropriate individual or individuals who can provide the information to the committee on short notice (2 to 4 weeks). As a minimum, nominations should include a full curriculum vitae and at least three letters of recommendation. The 2006 award will be presented at the AEESP reception at the WEF meeting in Dallas, Texas, in October 2006.

Recipients of the AEESP Founders' Award since 2000 were: Walter J. Weber, Jr., University of Michigan (2000); John L. Cleasby, Iowa State University (2001); Thomas M. Keinath, Clemson University (2002); C.P. Leslie Grady Jr., Clemson University (2003); Paul V. Roberts, Stanford University (2004); and Richard E. Speece, Vanderbilt University (2005).

CH2M Hill Doctoral Dissertation Award

Entries are sought for the 2005 CH2M Hill Outstanding Doctoral Dissertation Award, which annually recognizes the most outstanding doctoral dissertation that contributes to the advancement of environmental science and engineering. The award will consist of a plaque and a cash prize of $3000 for the student, and a plaque and a cash prize of $500 for the faculty advisor. CH2M Hill also provides $750 as travel reimbursement to recipients who attend the awards ceremony. Faculty advisors are encouraged to nominate a dissertation completed under their supervision by sending three copies of the dissertation to: David Sedlak, Department of Civil and Environmental Engineering, University of California, Berkeley, Berkeley, CA 94720; sedlak@ce.berkeley.edu; (510) 643-0256.

Nominations should include a simple letter of transmittal stating 1) the address, e-mail, and phone number for the student and advisor, 2) an indication as to when the dissertation was completed, and 3) a concise statement defining the student's intellectual contribution to the work. The latter statement is especially important if multiple authors contributed to the work under consideration. The copies will not be returned, so inexpensive photocopies are recommended. The deadline for submission is March 15, 2006 for dissertations completed during the 2005 calendar year. Faculty advisors are urged to limit themselves to a single entry (which will be considered for each of two awards); self nominations by students will not be accepted.

A selection committee of three AEESP members will read and judge each dissertation on the basis of 100 points allocated as follows: scientific and technical merit of the research (30 points), originality of the research (30 points), contribution to advancement of environmental engineering (30 points), and clarity of presentation (10 points). The selection will be made by September so that the recipient and advisor can plan to attend the AEESP reception at the WEF meeting in Dallas, Texas, in October 2006. Our thanks to CH2M Hill, Inc. for their generosity in sponsoring this award.

Montgomery-Watson-Harza Consulting Engineers/AEESP Master's Thesis Awards

Entries are sought for the 2006 Montgomery-Watson-Harza Master's Thesis Awards. First and second place awards will be given. Each award consists of a plaque and a cash prize for both the student and the faculty advisor. The prize for the first place award consists of a plaque and $1,500 for the student and a plaque for the faculty advisor. The second place award consists of a plaque and cash prize of $500 for the student and a plaque for the faculty advisor. Montgomery-Watson-Harza also provides $750 as travel reimbursement to all recipients who attend the awards ceremony. Faculty advisors wishing to nominate a student for this competition should send three copies of the thesis to: Dr. N. Nirmala Khandan, Department of Civil, Agricultural and Geological Engineering, New Mexico State University, Las Cruces, NM 88003; nkhandan@nmsu.edu.

The submission should be accompanied by a simple letter of transmittal stating 1) the address, e-mail, and phone number for the student and advisor, 2) an indication as to when the thesis was completed, and 3) a concise statement defining the student's intellectual contribution to the work. The latter statement is especially important if multiple authors contributed to the work under consideration. The copies will not be returned, so inexpensively bound photocopies are recommended. The deadline for submission is March 15, 2006 for theses completed during the 2005 calendar year. Faculty advisors are urged to limit themselves to a single entry;

News submissions deadline

The submissions deadline for the April 2006 AEESP Newsletter is **March 1, 2006.** Send news items to:

Eric Marchand
AEESP Newsletter Editor
marchand@unr.edu

self nominations by students will not be accepted.

A selection committee of three AEESP members will read and judge each thesis. Each thesis will be evaluated based on 100 points allocated to the following major categories: scientific and technical merit (30 pts), originality of research (30 pts), contribution to the advancement of environmental engineering (30 pts), and clarity of presentation (10 pts).

Selections will be made by September so that the recipients and their advisors can plan to attend the AEESP reception at the WEF annual meeting in Dallas, Texas, in October 2006. Our thanks to Montgomery-Watson-Harza for their generosity in sponsoring these awards.

AEESP Outstanding Paper Award

Nominations are sought for the 2006 AEESP Outstanding Paper Award for a "landmark environmental engineering and science paper that has withstood the test of time and significantly influenced the practice of environmental engineering and science." Nominators should send a copy of the paper and a letter (two pages maximum), which gives the citation, the reasons why the paper is considered a "landmark," and a description of the influence the paper has had on the practice of environmental engineering. Nominations must be made by members of AEESP who are not an author or co-author of the paper before July 1, 2006. According to the current rules of the competition, any author of a winning paper is ineligible for a subsequent award for a period of three years. Furthermore, at least one of the authors must be living. Send nomination packages to the chair of the awards committee: Dr. Nancy G. Love, Virginia Tech, Department of Civil and Environmental Engineering, 418 Durham Hall (0246), Blacksburg, VA 24061; nlove@vt.edu; (540) 231-3980.

Past winners since 2000 were:

2000: Crittenden, J.C., D.W. Hand, H. Arora and B.W. Lykins, Jr. (1987), Design Considerations for GAC Treatment of Organic Chemicals. J. AWWA, 79(1):74-82.

2001: Thackston, E.L. and P.A. Krenkel (1969), Reaeration Prediction in Natural Streams. J. Sanit. Engrg. Div., ASCE, 95(1):65-93.

2002: Elimelech, M. and C.R. O'Melia (1990), Kinetics of Deposition of Colloidal Particles in Porous Media. Environ. Sci. Technol., 24(10):1528-1536.

2003: Williamson, K.J. and P.L. McCarty (1976), A Model of Substrate Utilization by Bacterial Films. J. Water Poll. Control Fed., 48(1):9-24.

2004: Edzwald, J.K., W.C. Becker and K.L. Wattier (1985), Surrogate Parameters for Monitoring Organic Matter and THM Precursors. J. AWWA, 77(4):122-132.

2005: Han, M. and D. F. Lawler (1992), The (Relative) Insignificance of G in Flocculation. J. AWWA, 84(10):79-91.

Malcolm Pirnie/AEESP Frontiers in Research Award

Nominations are sought for the Malcolm Pirnie/AEESP Frontiers Award. This award honors an individual who has advanced the environmental engineering and science field through recognized research leadership and pioneering efforts in a new and innovative research area. Only AEESP members are eligible to nominate candidates, and only AEESP members are eligible for this award. Nominations must include a supporting statement plus selected literature citations detailing the nominee's contribution to the new and innovative research achievement for which the nominee is being honored. The deadline for nomination is March 15, 2006. Nominations will continue to be valid for a period of three years. The selected recipient will receive a plaque and a cash prize of $4000. Malcolm Pirnie also provides $750 in travel reimbursement to be used by the recipient to attend the awards ceremony. Send nomination packages to the chair of the awards committee: Dr. Nancy G. Love, Virginia Tech, Department of Civil and Environmental Engineering, 418 Durham Hall (0246), Blacksburg, VA 24061; nlove@vt.edu; (540) 231-3980.

Past winners since 2000 were: Bruce E. Logan, The Pennsylvania State University (2000); Arup K. SeGupta, Lehigh University (2001); Charles N. Haas, Drexel University (2002); Fred Pohland, University of Pittsburgh (2003); Mark Wiesner, Rice University (2004); and Paul L. Bishop, University of Cincinnati (2005).

Our thanks to Malcolm Pirnie, Inc., for their generosity in sponsoring this award.

AEESP Outstanding Educator Awards

Nominations are sought for the AEESP Outstanding Educator Awards. The purpose of these awards is to honor individuals who are making outstanding contributions to the teaching of environmental engineering, both at the individual's home institution and beyond. Although education can take many facets and is often accomplished through research, these awards are intended to honor faculty who have made substantive contributions directly through teaching, through the development of new pedagogic techniques, and/or through the sharing of these skills with others.

The "Outstanding Teaching in Environmental Engineering and Science" award is intended to honor a faculty member who has made substantive contributions directly through class-oriented teaching, as enhanced through the development of new pedagogic techniques. Although open to nomination at any rank, the award is biased towards nominees who (1) are at the assistant or associate level, (2) have demonstrated success and the application of innovative teaching techniques, and (3) who teach large undergraduate classes.

The "Outstanding Contribution to Environmental Engineering and Science Education" award is intended to

recognize and honor the development of innovative teaching methods, including the application of these methods in the classroom and the dissemination of methods to the academic community. This award is open to nomination at any rank, although the award is biased towards nominees who (1) have developed and applied innovative and improved teaching techniques and (2) have disseminated these contributions to the educational community through appropriate and widely accessible means.

Only AEESP members are eligible for this award. Individuals are eligible to receive either award only once; previous winners are ineligible for the same category. Supporting documentation of nominations is not required at the time of nomination, but successful nominations will be those that either include such information or provide the name of an appropriate individual or individuals who can provide the information to the committee on short notice (2 to 4 weeks). As a minimum, such information should include a full curriculum vitae and at least three letters of recommendation. The deadline for nomination is March 15, 2006. The selected recipient will receive a plaque and a cash prize of $1000. Send nominations to the chair of the awards committee: Dr. Nancy G. Love, Virginia Tech, Department of Civil and Environmental Engineering, 418 Durham Hall (0246), Blacksburg, VA 24061; nlove@vt.edu; (540) 231-3980.

Past winners of the Outstanding Teaching in Environmental Engineering and Science Award were: Amy K. Zander, Clarkson University (2000); Susan M. Larson, University of Illinois (2001); James A. Smith, University of Virginia (2002); Angela Bielefeldt, University of Colorado at Boulder (2004); and Say-Kee Ong, Iowa State University (2005).

Past winners of the Outstanding Contributions to Environmental Engineering and Science Education Award were: Steven C. Chapra, Tufts University (2000); Susan J. Masten, Michigan State University (2001); James R. Mihelcic, Michigan Technological University (2002); Michael Semmens, University of Minnesota (2003); and Daniel Oerther, University of Cincinnati (2004).

The Fred Pohland Memorial Award

The purpose of this award is to honor an individual who has made sustained and outstanding efforts to bridge environmental engineering research and practice. Only members of AEESP and/or AAEE are eligible to receive this award. The award will consist of a medal, a cash award, and travel costs up to $1,000 to the AEESP reception at the WEF meeting in Dallas, Texas, in October 2006 to receive the award. Those making nominations are not required to submit any supporting documentation; however, nominations that assist the Awards Committee in obtaining necessary materials (curriculum vitae, information regarding former students, letters of support, other information pertinent to the nomination) by directly providing the information or by providing names of appropriate and willing contacts are desirable.

Nominations for the 2006 Fred Pohland Memorial Award must be sent before March 15, 2006 to the chair of the awards committee: Nancy G. Love, Department of Civil and Environmental Engineering, 418 Durham Hall (0246), Virginia Tech, Blacksburg, VA 24061. Past nominations are considered valid for three years, as long as the nominee continues to be ranked among the top 5 candidates.

Previous recipients of the Fred Pohland Memorial Award were Rhodes Trussel and Ray Loehr (2005).

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

Joan Rose and Chuck Haas head new EPA/DHS Center

The Environmental Protection Agency and the Department of Homeland Security have awarded a 5-year $10-million project to the Center for Advancing Microbial Risk Assessment (CAMRA). CAMRA will be co-directed by AEESP members Professors Joan Rose at Michigan State University and Chuck Haas at Drexel University. MSU is the lead institution, and other universities who are participating include the University of California-Berkeley, University of Arizona, Northern Arizona University, Carnegie-Mellon University, and the University of Michigan. Other AEESP members who are part of CAMRA include Syed Hashsham (MSU) and Patrick Gurian (Drexel).

CAMRA will develop better methods to understand transport of infectious agents in the environment, better understanding of the relationship between the exposure and likelihood of illness, better understanding of the dynamics of contagious diseases in populations, better understanding of factors contributing to public perception of the risks from these infections, and state of the art tools for sharing such information in a collaborative method amongst researchers and users.

CAMRA is the 5th Homeland Security Center of Excellence, and the first center jointly funded by DHS and EPA.

Request for Proposals for 2007 AEESP Conference

Proposals are solicited from universities to host the 2007 AEESP annual conference.

Introduction and Procedure

The AEESP Conference will be the flagship event for members to exchange information on novel research and educational activities. It will serve as a venue for the exchange of information between the academic and practitioner communities, particularly relating to the advancement of innovative research and the preparation of students for professional practice in environmental engineering. AEESP conferences are held every other year.

Responders to this RFP should do so with the intent to host the conference in 2007. Responses should include a projected budget, as detailed below, and narrative responses to enable the selection committee to evaluate the attributes detailed in the next section. The responses should be transmitted to the chair of the conference planning committee (Charles Haas at Drexel University) as a single pdf file; send to haas@drexel.edu.

The proposals should be submitted by 1/30/06.

Attributes for Selection

The narrative portion of the RFP should provide details for the committee to evaluate the following attributes:

- level of institutional support (financial, facilities, and other)
- commitment and depth of the local planning team
- innovative approaches to involvement of students/student organizations (e.g., pre-conference workshops, contests…)
- convenience to major airport(s)
- convenience to road travel
- availability of tourism activities
- adequacy of conference venue (meeting rooms, space for posters, etc.)
- availability of adequate spectrum of housing (both high and low end)
- availability of family friendly services (e.g., childcare)
- potential contributions from external sponsors[1]
- estimated registration fee
- estimated housing cost
- linkage to other events that might be of interest to attendees (other conferences)
- different geographic region from recent conferences held by AEESP
- how efforts will be made to outreach to local, regional, and national communities of practice that might attend

In selecting the conference dates, proposers should avoid conflicts with events that are attended by many AEESP members (e.g., AWWA annual and specialty conferences, Gordon Conferences, WEF annual and specialty conferences, AAAR conferences, IWA events, AWMA Annual Conference, ACS conferences, ASM Conference, and EWRI Conference). Within these constraints, the committee requests each proposer to suggest two sets of dates in the spring or summer (of 2007) that would work at their venue.

The proposers should suggest particular themes that would be appropriate for their venue. It is not the intention that the conference exclusively focus on these themes; however the themes can provide a particular "flavor" to selected sessions.

The ultimate program will be developed by a committee consisting of members from the AEESP conference planning committee, and the local host committee.

Note that while we are not discouraging RFP's from any geographic area, in view of the last two conferences (2003 – Toronto; 2005 – Clarkson) being held in the Northeast, we strongly encourage submissions from institutions in other geographic areas.

Specific Budget Elements

The budget projection should be prepared using the following outline. Two scenarios regarding attendance should be used as indicated below. The registration fee needed to produce a breakeven budget under either scenario should be indicated.

[See Table, p. 8.]

It is the intention of AEESP that these conferences run on a "breakeven" basis. Accordingly, although AEESP will defray up to $3000 in expenses, proposers should submit on the basis that any financial gains (or losses) are the responsibility of the host organization.

Conference Format

The format will typically be a Sunday PM through Wednesday noon event, with pre-conference activities on Sunday morning (and possibly Saturday). The AEESP Board will have its regular meeting either immediately before or immediately after the conference (1.5 days); the proposer should identify the best time for this to occur, and address the availability of a meeting room for the AEESP Board meeting.

The conference will include the following activities:

- Organized oral sessions on topical areas containing invited speakers. Some of these will focus upon specific topics proposed by the host organizer, and will include speakers from outside the AEESP community as appropriate.
- Oral sessions containing contributed papers relating to educational and research activities, and policy issues, of broad interest to the membership.
- Organized panel sessions focusing on forefront issues in education and research in environmental

[1] In the past, AEESP has received funding for its conferences from the National Science Foundation and from US EPA. The Conference Committee and the Board will work with the selected organizers in submitting proposals for support from these agencies. However, it is ultimately the responsibility of the host to submit and write the NSF proposal. Examples of previous NSF proposals will be provided to potential hosts.

engineering and science
- Reports of discussion committees focusing on development of position documents pertaining to environmental engineering education and research
- Contributed poster sessions containing papers of interest to segments of the membership concerning research and educational activities of members (and their students)
- Exhibitor space including participating publishers, consultants, and public sector agencies
- Pre or post-conference workshops on issues of interest to segments of the membership (e.g., teaching effectiveness, accreditation, tenure preparation, student preparation for employment, novel forefront research techniques, preparation for the environmental PE)
- Workshops and conference sessions jointly organized by academics and individuals from the practitioner community.

Historically, the oral (platform) sessions at AEESP conferences have been plenary – i.e., only one session per time slot. However with the evolution of the conferences, the use of selected parallel sessions may become necessary.

The organizers are encouraged to work with the AEESP conference committee to have at least a portion of the presentations published in a peer reviewed form (e.g., special issue of an appropriate journal).

2007 Conference Planning Committee
Charles N. Haas, Drexel University (Chair); Harry (Rick) Diz, Gannon University (Vice-Chair); Kathy Banks, Purdue University; Jacimaria Batista, UNLV; Paige Novak, University of Minnesota; Dan Oerther, University of Cincinnati; Bart Smets, Tech University Denmark; Tom Holsen, Clarkson University; and Isabel Escobar, University of Toledo.

		Scenario I	Scenario II
Income			
Registration Fees (total)			
Sponsorships:			
	External		
	Internal (Host)		
Grant from NSF:			
Total Income			
Expenses			
Discounted and Complimentary Registrations			
Personnel costs:			
	Admin. Assistant		
	Other staff costs (Web site, helpers, benefits)		
Supplies and Printing			
Transportation (tours and misc.)			
Facilities and audio-visual services			
Hospitality less guest meal fees:			
	Breaks, Breakfasts, Lunch		
	Welcome Function		
	Luncheon		
	Banquet		
	Meetings		
Net			
	Scenario I: 30 student attendees, 120 regular attendees		
	Scenario II: 60 student attendees, 240 regular attendees		

AEESP Education Committee

The AEESP Education Committee formed two working groups to work on problem based learning and text reviews. Both groups have created resources to support your activities in the classroom.

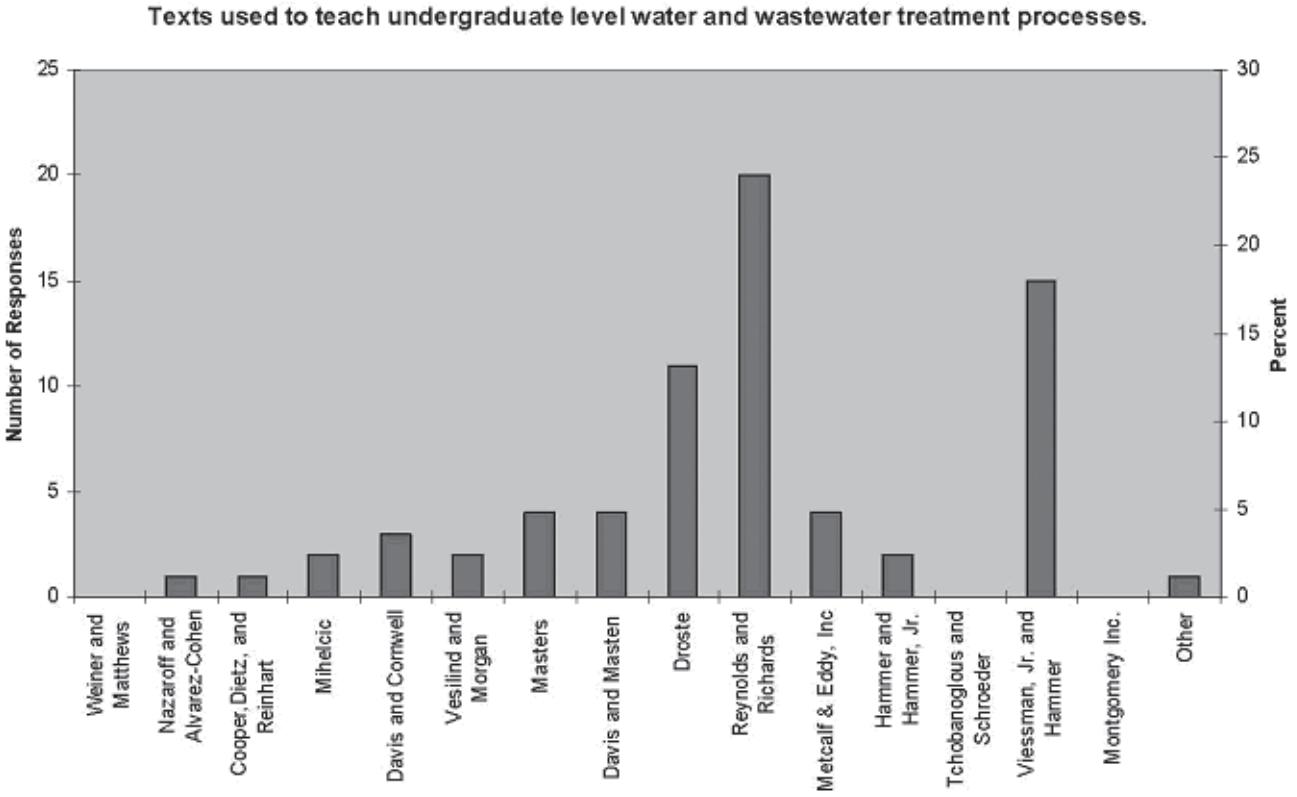
Problem Based Learning

The use of case studies in classroom instruction can supplement the learning of engineering principles. They give an insider view of the inherent complexities encountered when the principles are put into practice. Case studies have the potential to serve as a highly effective learning tool for developing a modern environmental engineering work force – one that is firmly grounded in engineering principles and adequately trained to address multidisciplinary challenges of environmental engineering practice. The Problem Based Learning working group received eight excellent case studies. Each case study was peer reviewed by two members of the working group and revised by the authors. The committee will format the case studies and make them available to AEESP members in the near future.

Text Reviews

AEESP members submitted 70 reviews of undergraduate level water and wastewater treatment processes texts to the Text Review working group. A variety of questions were asked to (1) provide AEESP members with pros and cons of each text, (2) provide prospective authors with gaps that could be filled with a new text, and (3) give authors feedback on their text. Textbook usage by the respondents is provided in Figure 1. Approximately 50% of the respondents "strongly agreed" or "agreed" that a new text in this area would be beneficial to their course. The complete dataset is available to AEESP members via a link on the AEESP Web site at http://www.aeesp.org/index.htm ("Today's Highlights," third item down). Because the texts are used in a variety of courses with varying content, the committee has decided not to draw its own conclusions from the data. It is worth pointing out that many of the texts, which were evaluated in this study, also serve other courses, such as Introduction to Environmental Engineering. Therefore, they may have greater usage than what is reflected in the survey data. The committee is interested in your feedback. Do you think this type of textbook assessment is useful? What additional information would be helpful? Are there questions in the survey that could be added or deleted? Please send your comments to Mike Butkus at Michael.Butkus@usma.edu.

Participating members of the Education Committee are: Bill Arnold, Lisa Axe, Alok Bhandari, Mike Butkus, Dionysios Dionysiou, Metin Duran, Andrew Jackson, John Veenstra, and Aarne Vesilind.



AEESP Student Services Committee wants student feedback

Do you wish there was a North American Student Group dedicated to Environmental Engineering and Sciences? The Student Services Committee (SSC) of AEESP has prepared a student survey to gauge interest among students to form a new environmental engineering and sciences organization. The purpose of the survey is to investigate whether students around the U.S. and Canada support the formation of a new professional group dedicated to environmental engineering and science. It is designed to collect data and opinions relative to this topic. The target audience includes individual students, student groups, and faculty advisors to student organizations.

An electronic format of the survey can be obtained from Nathalie Tufenkji (Nathalie.tufenkji@mcgill.ca), Defne Apul (defne.apul@utoledo.edu), or from the AEESP Web site (URL: http://www.aeesp.org/eesf/index.php). As members of the SSC, we invite you to encourage your students to take the survey.

Thank you in advance for your participation in this study.

– Nathalie Tufenkji and Defne Apul

Tau Chi Alpha: The National Environmental Engineering Honorary

Tau Chi Alpha (TCA), the National Environmental Engineering Honorary, was incorporated in the State of Maryland in 1998. The objective of the "Honorary" is to advance the environmental engineering profession by:

a. identifying and placing a mark of distinction on those environmental engineering students and engineers who have demonstrated high scholastic achievement, ethical character, practicality, and sociability or significant achievement in the environmental engineering profession; and

Michigan Tech faculty member Linda Phillips discussing International Senior Design project with community member in Santa Cruz, Bolivia.

b. contributing to continuing development and improvement of the profession.

The TCA motto is PEΔ (*Rho Epsilon Delta*), which symbolizes the members' commitment to *Reclaim the past, Enhance the present, and Design for the future.*

TCA consists of a Supreme Council, regularly established chapters in engineering schools, and alumni chapters. New chapters are designated by the names of the schools at which they are located. Alumni chapters may be established and named according to their geographical location.

As the environmental engineering profession grows and establishes itself as a distinct discipline, so does the need for a student based Honorary to acknowledge the best and brightest students entering the profession. To this end, TCA invites AEESP members and their students to establish a chapter of the environmental engineering honorary at their institution.

To learn more about TCA and how you and your students can establish a chapter at your school, please contact David Asselin, Executive Secretary, at dasselin@aaee.net or (410) 266-3311 (American Academy of Environmental Engineers). [Summary by Hector R. Fuentes & Robert R. Sharp, Supreme Council members]

Michigan Tech's International Sustainable Development Engineering Initiative

For five years, Michigan Tech civil and environmental engineering has administered capstone design projects that allow students to work on engineering projects in the developing world. To date 105 students have partnered with communities in Bolivia and the Dominican Republic to perform various design projects addressing storm water drainage, sanitation, site planning, and building analysis.

A graduate engineering program that partners with the U.S. Peace Corps was developed in 1998 to allow students to perform in-depth study of sustainable development in an international context. Students obtain graduate credit for training, service, and research while working abroad as engineers in the U.S. Peace Corps. To date, Master's International engineering students have served and performed research in 16 countries.

Other international activities include: support of a student chapter of Engineers without Borders and a student-run enterprise program that has partnered with the Keweenaw Bay Indian Community and a community in Boaco, Nicaragua.

To assist educators, researchers, and students involved in global engineering issues, the Web site not only contains a newsletter (click on "news") but also a link to many research reports and technical briefs that provide detailed information on water supply and treatment, wastewater treatment, public health, solid waste management, and construction in the developing world (click on "student reports, technical briefs, publications, and presentations"). On this page there is also a link to other Internet sites that have information related to engineering in the developing world. Learn more at www.cee.mtu.edu/sustainable_engineering.

What's so good about sustainability?

by P. Aarne Vesilind, Bucknell University

At the recent AEESP conference at Clarkson, the most talked about new idea in our business was sustainability. Some universities have been transforming their environmental engineering programs to embrace this concept, and others are contemplating doing so.

And yet, in our quiet reflective moments, we all had to admit that we really did not understand what exactly sustainability was, how we would get there, what we could actually teach, and if it was even possible to set this as a societal goal. These are heavy issues, and I can't begin to respond to these questions in this short discussion. But I can perhaps do one thing, and that is to ask whether or not the quest for sustainability is morally laudable, or whether it is morally neutral. That is, if we teach and promote sustainability within engineering and business, are we doing anything purposefully beneficial?

A widely held notion in ethics is that doing the right thing for the wrong reason is not morally admirable. Actions undertaken by a corporation in response to legal concerns and financial requirements are actually obligatory, in that society essentially demands that businesses make their decisions in line with legal and financial factors. On the other hand, for an action to be morally admirable, the motivating force is far different in character.

Consider this example: You are walking along a river and see someone in the water, obviously in trouble. You have a moral decision to make as to whether or not you will try to save his life. The example might be complicated in three ways.

1. Suppose you are actually a lifeguard and it is your (legal) responsibility to save people from drowning. If you save the man because it is your job to do so, this action has no moral components. Your job demands that you make the effort to save the man. Only if you choose to not try to save the drowning man, even though it is your duty to do so, does this become a moral question.

2. A second case might be that you recognize the man as someone who owes you a lot of money. If he drowns you will not be paid back, and so you put yourself in harm's way in order to save his life. Saving his life becomes good business.

3. Now consider a third case. What if the man in the water is actually a person to whom you owe a lot of money? If he drowns you would not have to pay him back, and thus, not helping him is to your advantage. The morally courageous act is then to save his life even though this ends up costing you money.

These three cases are analogous to the operation of a corporation when decisions regarding green technology and sustainability have to be made. The first case occurs when a company is required to be in compliance with laws and regulations. For example, the regulations might require the company to build a wastewater treatment plant. This is analogous to the lifeguard who has a legal duty to act and there is nothing morally admirable about this action. It becomes a moral problem only if the company chooses to ignore the regulations and tries to get away with dumping untreated effluent into the watercourse.

The second case occurs when a company undertakes voluntary measures to practice green technology because this increases their profitability. Such action is analogous to saving a drowning man because he owes you money. Saving the man because it is to your benefit to do so is not morally admirable, and doing green engineering because it is profitable is similarly not morally admirable. I do not want to argue that such actions are wrong, but I contend that these are not morally admirable actions if done for personal advantage or profit.

But what about actions taken within a company that would enhance environmental quality or public health, but would reduce corporate profitability? That is, what about an action that is not required by law and does not increase profits, but is simply the right thing to do, analogous to saving the drowning man even though you owe him a lot of money?

Many corporate leaders and engineers have discovered in recent years that the adoption of techniques for reducing adverse environmental impact by using non-hazardous raw materials, redesigning their products, and reducing their discharges to the environment often have positive effects on corporate profitability as well. As a result, many corporations have adopted "green" corporate policies. But the green color associated with these policies in most cases has more to do with the green of money than with the green of the environment. The vast majority of these companies have adopted a moral commitment to sustainability because green engineering saves them money. The focus is on financial concerns, not moral concerns. In other words corporations that develop environmentally friendly technology and profit from such development are simply "doing good business."

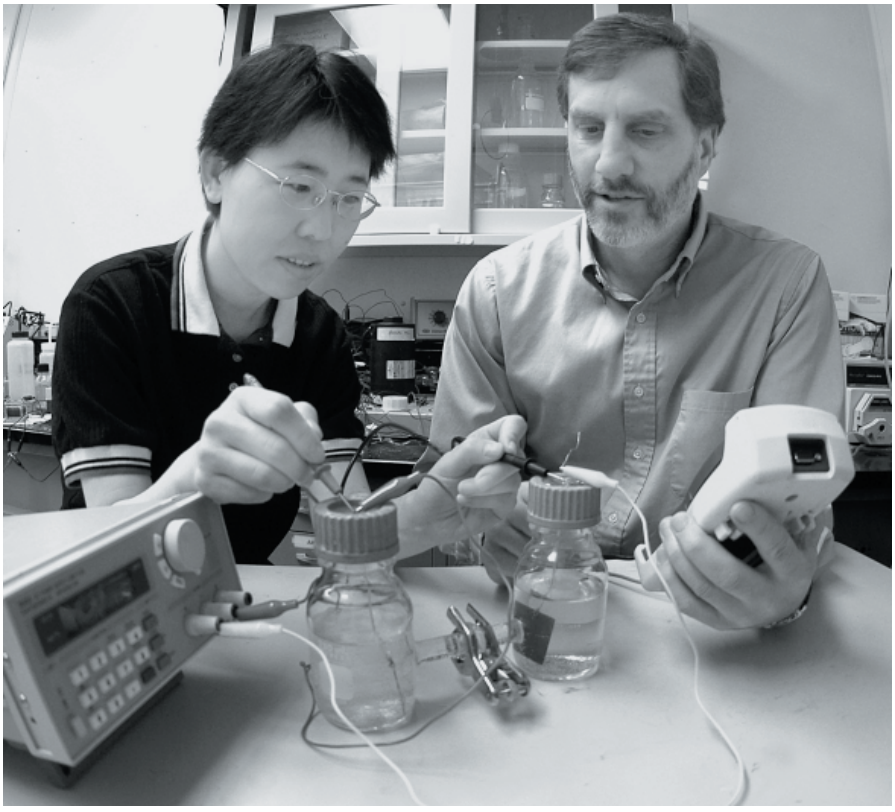
If the principles of sustainability and pollution prevention should ever collide with profitability, the company and its leaders are placed in a position of either having to renounce their sustainability objectives, or allowing the company to become less profitable. The free market system is poorly designed to promote sustainability, and adherence to the uncontrolled free market system can force corporate leaders to forsake their best intentions in order to maintain profitability, and there is nothing morally admirable about such a decision.

So what exactly are we teaching our students when we teach sustainability in our environmental engineering programs? Are we asking our graduates to do what is good for the environment and future people, or are we teaching them to use the principles of green engineering to help their clients make (or save) money? The first objective is morally laudable. The second is just good business.

[Note: This discussion is based on a paper co-authored by Jamie Hendry and Lauren Heine, entitled "The Moral Challenge of Green Technology," soon to be published in TRAMES, Tartu, Estonia.]

AEESP members win Popular Mechanics Magazine Award

Bruce Logan, Kappe Professor of Environmental Engineering at Penn State University, and **Hong Liu**, Assistant Professor of Bioengineering at Oregon State University, were winners of one of eight inaugural Popular Mechanics 2005 Breakthrough Awards to "recognize people and innovations that help improve lives and expand possibilities in the realms of science, technology and exploration." Logan and Liu were being honored for their work on modifying microbial fuel cells to produce hydrogen gas. Their invention accomplishes hydrogen gas production from any biodegradable material. In a paper published in *Environmental Science & Technology*, they demonstrated that approximately 3 moles of hydrogen could be produced per mole of acetate, with an energy input equivalent to only 0.5 moles of hydrogen. If the process were used as a method of wastewater treatment, it would be possible to generate hydrogen gas from the organic matter in the wastewater, thus accomplishing both hydrogen gas production and wastewater treatment in a single process.



University of North Carolina at Chapel Hill

The Department of Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, is pleased to announce that **William Vizuete** has joined the faculty as an assistant professor. Dr. Vizuete recently completed his Ph.D. in chemical engineering from the University of Texas at Austin. He holds a B.S. in chemical engineering from the University of Missouri at Rolla and an M.S. from UT, and has had several years of experience as a process engineer with ExxonMobil. William's doctoral research was on tropospheric mixing phenomena and ozone formation in southeast Texas, specifically developing tools to facilitate the application of air quality modeling to resolve a major policy issue. His longer-term interests are in air quality modeling and its interface with environmental policy.

University of Colorado at Denver and Health Sciences Center

New AEESP member **David C. Mays** has recently joined the Department of Civil Engineering at the UCDHSC Downtown Denver campus. He will be conducting research on clogging resulting from deposition of colloidal particles, and on related applications in water treatment and aquifer hydraulics. His teaching assignments will include fluid mechanics, hydrology and water treatment, and he will be advising graduate research for the Ph.D. program that is administered jointly with the University of Colorado at Boulder.

David received his B.S. from the University of Pennsylvania in 1995. After spending one year with Teach for America in Louisiana and two years as a consultant at Los Alamos National Laboratory, he returned to graduate school at the University of California at Berkeley, where he received his M.S. in 1999 and Ph.D. in 2005. David is a registered civil engineer in California and Colorado. He may be contacted through the Web site, http://carbon.cudenver.edu/~dmays.

University of New Hampshire

Ph.D. and M.S. ASSISTANTSHIPS. The Environmental Research Group at the University of New Hampshire has multiple M.S. and Ph.D. research assistantships available for next year. ERG annually conducts more than $4 million in externally sponsored research in partnership with industry, municipalities, state and federal agencies, and international organizations. Its 16 full and associate faculty members come from three departments and specialize in a number of areas: contaminated sediments characterization, treatment and management; advanced water treatment technologies; waste characterization and utilization; ground water processes and bioremediation; stormwater treatment technologies; oil spill response and restoration; and contaminant monitoring and remediation.

Specific research topics available for next year include:

- Techniques to Enhance Biological Filtration Performance
- Innovative Technologies for Removing Arsenic and Fluoride
- Assessment of Microbial Removal by Membranes
- Leaching of Mine Tailings used in Bound and Unbound Road Construction
- Management of Construction and Demolition Debris
- Development of Thin Reactive Caps for Contaminated Sediment Management

More information about current research areas can be found at our Web site: www.unh.edu/erg. Qualified candidates are encouraged to apply to the program and to contact Dr. Kevin Gardner by phone (603.862.4334) or e-mail (kevin.gardner@unh.edu).

University of Hawaii

POST-DOCTORAL FELLOW OR ASSISTANT RESEARCHER. In the near future, we will be looking for a post doctoral fellow or assistant researcher in the area of microbiologically influenced corrosion (MIC). The work will entail studying MIC for various alloys and soil types that are relevant to buried munitions. Both laboratory and field work will be conducted. Corrosion studies in diverse soils are possible as 11 of the 12 soil orders are found in Hawaii. Further information on the positions will be posted at hawaiicorrosionlab.org. For immediate information, forward your inquiries to Dr. Chittaranjan Ray, Department of Civil & Environmental Engineering, University of Hawaii at Manoa, Honolulu, Hawaii 96822; phone: 808-956-9652, e-mail: cray@hawaii.edu.

Oregon State and Portland State Universities

Ph.D. STUDENT ASSISTANTSHIPS. Oregon State and Portland State Universities are offering up to ten Ph.D. research assistantships to explore all aspects of the Earth's subsurface microbial biosphere. Tuition and stipend are provided by the NSF IGERT program and the two universities. Students will work in interdisciplinary teams of environmental engineers, oceanographers, microbiologists, microbial ecologists, geologists, soil scientists, and chemists to solve environmental problems, to understand global chemical cycles, and to determine the impact of subsurface microorganisms on surface ecosystems. More information can be found at: http://oregonstate.edu/dept/igert/, or contact Lew Semprini, Department of Civil, Construction, and Environmental Engineering, OSU: lewis.semprini@orst.edu. Students from all scientific backgrounds are encouraged to apply to departments represented by IGERT faculty at either institution. U.S. citizens or permanent residents can be supported by IGERT funds, however students of all nations can participate in the program. Review of applications starts 1/15/06. Oregon State and Portland State Universities are committed to equality in education.

University of South Carolina

ASSISTANT/ASSOCIATE PROFESSOR, ENVIRONMENTAL HEALTH SCIENCES, TENURE TRACK. The University of South Carolina seeks applications from scholars committed to teaching and research excellence in human environmental health sciences. Preferred research areas related to human health include occupational hygiene, exposure and/or risk assessment, toxicology, biological monitoring, biohazards, infection control, environmental microbiology, and indoor air quality, but others will be considered. The Department offers Ph.D. and M.S. degrees with specializations in occupational hygiene, environmental quality, and hazardous materials management. The successful applicant will have postdoctoral experience, a record of excellence in funded research and scholarship (or strong evidence of talents to develop a funded research program) and be expected to contribute to the NIOSH-supported occupational hygiene program. Application reviews begin January 5, 2006 (open until filled). Applicants should apply online at uscjobs.sc.edu, Requisition #041325, and also forward a CV, statement of professional goals in research and teaching, and names of 3 references (with mailing address, e-mail, and phone number) to: Dr. Alan Decho, Search Chair at awdecho@gwm.sc.edu. The University of South Carolina is an affirmative action, equal opportunity employer. Women and minorities are encouraged to apply.

Rowan University

TENURE-TRACK FACULTY POSITION IN WATER RESOURCES ENGINEERING. Rowan University invites applications for a tenure-track faculty position in water resources engineering at the Assistant Professor level, subject to available funds. Details regarding this position can be found at our Web site at www.rowan.edu/engineering. The anticipated starting date for this civil and environmental engineering faculty position will be September 1, 2006 or January 15, 2007. The review of applica-

tions will begin February 15, 2006 and will continue until the position is filled. Interested candidates are invited to submit a letter of application, a curriculum vita, a statement of teaching interests, a statement of research interests, and a list of three references (with telephone numbers and e-mail addresses) to: Kauser Jahan, Ph.D., P.E., Chair, CEE Search Committee, Rowan University, 201 Mullica Hill Road, Glassboro, NJ 08028-1701, Telephone: 856-256-5323; FAX: 856-256-5242; e-mail: jahan@rowan.edu. Rowan University is an affirmative action/equal opportunity employer. Women, minorities, and those with disabilities are encouraged to apply.

University of Michigan

TENURE-TRACK FACULTY POSITION IN HYDROLOGY. The Department of Civil and Environmental Engineering at the University of Michigan invites applications for a tenure-track faculty position in the general area of Hydrology.

Applications in any area of hydrology will be given full consideration. Areas of particular interest include: watershed-scale resource management, basin-wide contaminant fate and transport assessment, application of distributed sensor networks for hydrological applications, and climate interactions with land surface processes. The appointment can be at any level from assistant to full professor, consistent with the qualifications of the applicant. The selected candidate will be expected to teach undergraduate and graduate classes and to establish an active externally-funded research program. Aside from interacting with the faculty in the Environmental and Water Resources program, the candidate will be expected to forge collaborations across disciplines within and outside the College of Engineering. Emerging opportunities exist with faculty and centers in the department of Atmospheric, Oceanic and Space Sciences, the department of Electrical Engineering and Computer Science, the School of Natural Resources and the Environment, and the Department of Geological Sciences. The University strongly encourages and facilitates multi-disciplinary initiatives to explore innovative approaches to national and global environmental challenges. Women and minority candidates are particularly encouraged to apply, and the University is responsive to the needs of dual career applicants. Applications will be reviewed as received and it is intended to conduct interviews in early 2006.

Candidates should send a curriculum vitae, statement of teaching and research interests, and names and contact information for three references to: Professor Steven J. Wright, Chair, Hydrology Search Committeee, 113 EWRE, University of Michigan, Ann Arbor, MI 48109-2125. The University of Michigan is an Equal Opportunity/Affirmative Action Employer.

Michigan Technological University

TENURE-TRACK FACULTY POSITIONS. The Department of Civil and Environmental Engineering at Michigan Technological University invites outstanding applicants for tenure-track faculty positions beginning August, 2006. The position(s) will be filled at the rank of Assistant, Associate, or Full Professor. We are seeking individuals who can contribute to Department-led research and teaching initiatives related to: (1) sustainability, focusing on both water and the built environment; (2) infrastructure systems and hazard mitigation; (3) construction materials engineering; and (4) engineering in the developing world.

The candidate must demonstrate a strong commitment to excellence in teaching and research, with the desire to strike a balance between undergraduate teaching, graduate advising, and scholarly activity. Candidates must demonstrate the ability to sustain a strong externally funded research program in their area of expertise.

The Michigan Tech Civil and Environmental Engineering Department includes nearly 100 full-time graduate students (30 Ph.D.) and over 500 undergraduates. Annual research funding exceeds $4 million and the environmental engineering undergraduate and graduate programs are both nationally ranked by U.S. News & World Report. Department faculty members work in a flexible, inclusive environment and have the opportunity to collaborate with the Sustainable Futures Institute, Center for Water and Society, Remote Sensing Institute, Center for Science and Environmental Outreach, and the International Sustainable Development Engineering Initiative.

More information on how to apply for the position and the department, university, and community can be found at: http//www.cee.mtu.edu. Women and under-represented groups are especially encouraged to apply. Michigan Technological University is an equal educational institution/equal opportunity employer.

The Johns Hopkins University

TENURE-TRACK FACULTY POSITION, ENVIRONMENTAL SYSTEMS/POLICY. The Johns Hopkins University Department of Geography & Environmental Engineering invites applications for a tenure-track position in systems analysis/operations research/mathematics with application to environmental science, engineering, and policy. The department is concerned with understanding the nature and dynamics of ecosystems, engineered systems, and societies, and the design of strategies and technologies to address pressing environmental problems. The successful candidate would participate in the department's undergraduate program in Environmental Engineering and its interdisciplinary graduate programs, especially the program in Systems Analysis & Economics for Public Decision Making. The systems area is one of several areas in which the department plans additional appointments.

Candidates should have a doctorate in engineering, operations research, applied mathematics, quantitative policy analysis, or other appropriate discipline. The successful candidate will be able to teach courses in the theory and use of systems analysis, and is expected to develop a strong, internationally recognized research program in their area of interest.

Systems methods can include optimization, scientific computation, simulation, control, decision analysis, and statistics. The Department is multidisciplinary, and especially encourages applicants who appreciate the necessity of collaborative research to solve environmental problems. Candidates who have experience in multidisciplinary teams, especially on engineering efforts, are preferred.

Preference will be given to appointments at the assistant professor level, although outstanding candidates of other ranks are encouraged to apply. Send a letter of interest, curriculum vitae, a one to two-page summary of research and teaching interests, relevant papers and publications, and names of three references in a single pdf file to dogee@jhu.edu. For full consideration, applications should be submitted before January 15, 2006. The Whiting School of Engineering is committed to building a diverse educational environment; women and minorities are strongly encouraged to apply. The Johns Hopkins University is an EEO/AA employer.

Pennsylvania State University

DEPARTMENT HEAD, CIVIL AND ENVIRONMENTAL ENGINEERING. Penn State University seeks nominations and applications for the position of Head of the Department of Civil and Environmental Engineering. It is intended that the position will be filled by July 1, 2006. The successful candidate should provide innovative and energetic leadership with strong administrative and interpersonal skills. An earned doctorate in civil or environmental engineering or a related field is required.

The 36 faculty members are organized into programs in Construction, Environmental Engineering, Structures, Transportation, and Water Resources. There are about 450 upper-level undergraduate students and 150 graduate students in the department. A majority of the research conducted by faculty in the department is related to the rehabilitation of infrastructure and environmental protection. Recent annual research expenditures are between $9 and $12 million. Further information on the department can be found at http://www.engr.psu.edu/ce/.

Nominations and applications (including curriculum vitae, three or more references, and philosophy of leadership) will be sought until January 31, 2006. Applications and nominations will be considered until the position is filled and will be handled in confidence. Inquiries should be directed to Prof. Brian Dempsey, 212 Sackett Building, University Park, PA 16802, (814) 865-1226, or to PSUCEEsearch@engr.psu.edu. Penn State is committed to Affirmative Action, equal opportunity and the diversity of its workforce.

Washington University in St. Louis

FACULTY POSITIONS IN CHEMICAL AND ENVIRONMENTAL ENGINEERING. The Department of Chemical Engineering at Washington University in St. Louis invites applications and nominations for up to three tenure-track positions from assistant to full-chaired professor level. The department seeks individuals with outstanding academic record, who are dedicated to excellence in education and research. Although candidates with research interests in all areas related to chemical and environmental engineering will be considered, preference will be given to individuals with expertise in biocomplexity in the environment, genome-enabled environmental science and engineering, systems biology, bioenergetics and metabolic pathways in engineered systems or natural ecosystems, bioenergy production, molecular toxicology, phytoremediation, water reuse and sustainable technology via bioengineering (biomedical and biochemical) and nanotechnology.

Successful candidates are expected to develop a recognized program of externally funded research and demonstrate a strong commitment to undergraduate and graduate education. The Department currently has 9 full-time faculty and 40 doctoral students, with major areas of research including aerosol science and engineering, catalysis and chemical reaction engineering, complex fluid dynamics, processing science of micro-and-nanostructured materials, and environmental engineering science.

Interested individuals should send a letter of application including a statement of research and teaching interests and plans, current resume, copies of up to three pertinent publications, and names and contact information of at least three references to: facultysearch@che.wustl.edu (electronic submissions are highly encouraged) or Chair, Faculty Search Committee, Department of Chemical Engineering, Campus Box 1198, Washington University, St. Louis, MO 63130. Screening of applicants will begin in February 2006 and will continue until the position is filled. Washington University is an equal opportunity/equal access/affirmative action institution.

EnvE #5 on Careerbuilder

Environmental Engineer is number 5 on the Careerbuilder.com list of jobs "growing so quickly that they made the Bureau of Labor Statistics' list of the 30 fastest-growing jobs through 2014. But just as importantly, they topped the fastest-growing list in terms of salary." (Hydrologist is number 10.)

The full list is located at: http://channels.netscape.com/careers/package.jsp?name=careers/pm/highpayingjobs

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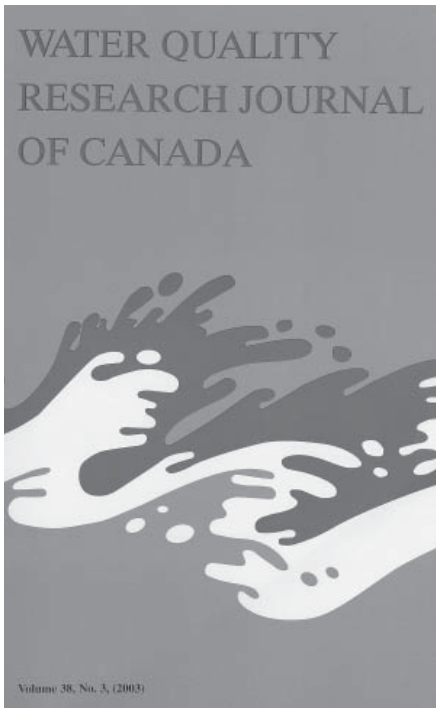

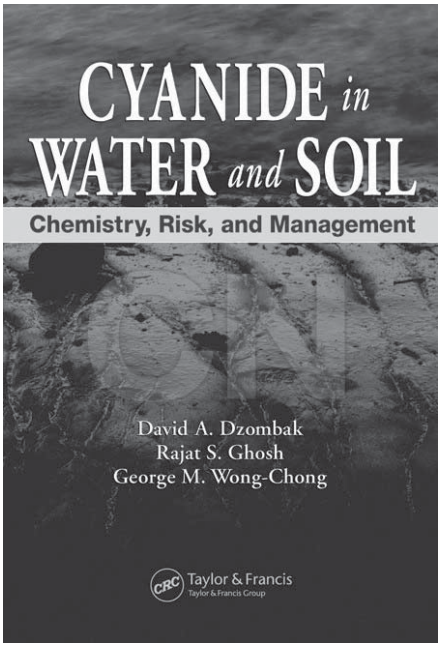

New book

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Symposium Announcement & Call for Papers

Safe Drinking Water: Where Science Meets Policy

March 16-17, 2006
Carolina Environmental Program
University of North Carolina at Chapel Hill
Chapel Hill, NC USA

The Carolina Environmental Program of The University of North Carolina at Chapel Hill will host an environmental symposium, *Safe Drinking Water: Where Science Meets Policy*, March 16-17, 2006, at the William and Ida Friday Center for Continuing Education in Chapel Hill, North Carolina, USA. This event will provide the most up-to-date information for leaders in the area of water resources worldwide, showing how advances in scientific understanding, technology, and innovative policies can help solve the pressing challenges of providing safe drinking water to the world's population. Leaders in the water resources field will leave the conference with new information, new contacts, and new solutions for their water resources challenges. Proceedings of the Symposium will be published, and a Web site created to allow access to the proceedings from around the world.

Safe Drinking Water: Where Science Meets Policy will begin with a plenary session of presentations by several internationally renowned figures in the area of water resources. Attendees will then split into focus area tracks, each led by one of the plenary speakers. These tracks will include: water and human health in developing countries and disadvantaged communities (led by Jamie Bartram, coordinator of Water, Sanitation and Health, World Health Organization); emerging chemical and microbial contaminants in drinking water (led by Thomas Ternes, German Federal Institute of Hydrology); water supply management (led by Lester Snow, director, California Department of Water Resources); and watershed protection (led by Tom Schueler, director of Watershed Research and Practice, Center for Watershed Protection).

The Symposium will also include informal opportunities for sharing of ideas, such as a plenary reception and dinner; and a separate poster session for students and for others who want to share the results of their work.

For registration information, please visit the Carolina Environmental Program's Web site at http://www.cep.unc.edu/symposium/2006/index.html, or call Tony Reevy at (919) 966-9927. To view a call for participation in a poster session, for the Symposium, visit http://www.cep.unc.edu/symposium/2006/papers.html. Poster submission abstracts should include the name of the potential author, the title of the proposed poster, and an abstract of the proposed poster.

AHWA First International Conference "Healthy Water in the Arab World"

June 7-9, 2006
Cairo, Egypt

The Arab Healthy Water Association, AHWA, cordially invites you for its First International Conference on "Healthy Water in the Arab World," June 7-9, 2006, Cairo, Egypt, with the slogan "Healthy Water is the Right of All; Healthy Water for Healthy Citizens."

The conference themes cover but are not limited to water resources and water management in the Arab world, water standards of healthy water for different purposes, environmental impacts on water quality in the Arab World, water technology for changing natural water to healthy water, economy of healthy water technology, potable water networks, and design, performance, usage, and maintenance. Abstracts are due by March 15, 2006.

For more information, please e-mail nelly.abboud@uconn.edu, or visit http://www.mgwater.com/arabhwa.shtml.

Call for Papers
Announcing the inaugural edition of the interdisciplinary, peer-reviewed

Journal of Engineering for Sustainable Development: Energy, Environment, and Health

ISSN 1553-4667

The *Journal of Engineering for Sustainable Development: Energy, Environment, and Health* invites submission of technical papers. The journal also seeks nominees with international credentials to provide editorial direction for the Journal. Its inaugural edition is to be released in Spring 2006.

The aim of the *Journal* is to provide a high-quality, interdisciplinary forum for advancing appropriate technologies in water, sanitation, energy, health, and the environment especially in developing regions of the world. In particular, the *Journal* hopes to improve education resources and technology transfer to increase the effectiveness of projects working towards the United Nations Millennium Development Goals.

The inaugural issue of the *Journal of Engineering for Sustainable Development: Energy, Environment, and Health* will focus specifically on the realization of the United Nations Millennium Development Goals, including but not limited to applications involving:

- Improving access to drinking water
- Improving sanitation
- Sustainable energy development and use
- Eradication of poverty and hunger
- Environmental and health education
- Barriers to implementing the Millennium Development Goals
- Educational strategies and initiatives to support sustainable development

Papers should be submitted electronically as pdf attachments to: sustainableengineering@collegepublishing.us

For more information, visit the *Journal's* home page (www.collegepublishing.us/jesdhome.htm), or contact Dr. Brad Striebig, general editor, at:
sustainableengineering@collegepublishing.us

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