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Need to renew your 2008 AEESP membership?

Go to "Join > membership renewal" on the AEESP Web site:

 AEESP.org

President's Letter



James Mihelcic

Dear AEESP members, I can still remember back in the spring of 1978 when I selected environmental engineering as my undergraduate major. At that point in my life I had little idea what our discipline encompassed. I did know

in my heart that the environment was something I was passionate about and had to make part of my professional life.

Our discipline seems to have expanded so much since that time when I was educated to deal with issues of water supply and treatment, wastewater collection and treatment, air pollution control, and solid waste management. Obviously these areas still encompass enormous importance to our discipline and the communities we serve. But since that time, other areas have been added to our "to do list." For example, the United Nations Environment Programme (UNEP, 2002) lists ten existing or emerging environmental issues:

- Globalization, trade & development
- Coping with climate change & variability
- The growth of megacities
- Human vulnerability to climate change
- Freshwater depletion and degradation
- Marine and coastal degradation
- Population growth
- Rising consumption in developing countries
- Biodiversity depletion
- Biosecurity

Besides these issues, AEESP members also work on issues of the built environment, health, equity, and security. Environmental engineering practitioners (Selna et al., *Proceedings of the 79nd Annual Water Environ-*

ment Federation Conference & Exposition, 2006) have even documented the pressing need to increase the supply of environmental engineers in a world where issues such as population, changing regulatory requirements, and decaying infrastructure have created an even larger demand. And if one carefully reads the Millennium Development Goals you will see that 3 out of 8 goals, 8 of the 16 targets, and 18 of the 48 indicators relate directly to health. Obviously our "to do list" is much greater than most of us ever imagined when we began our education.

For many AEESP members, all the traditional and emerging environmental issues we work on can be framed in concepts of "sustainability" and "sustainable development." In more simple terms, the world's social and economic well-being is directly linked to a healthy environment. Some even espouse that society and the economy are really just a subset of the environment.

Based on our collective actions, I am proud to say that AEESP members are assuming a leadership role in this area. Why is it that our profession has been able to travel the tortuous path from treatment to pollution prevention to sustainability? I think one reason is that the fundamental skill set our profession embraced decades ago was well justified and provided us and our students the ability to achieve lifelong learning and work on the problems of today, as well as of tomorrow. Our discipline also embraced the concept that society and the environment were interconnected well before many other professions.

You can be nothing but proud when observing the leadership of our members and their students as they lead efforts to green our campuses and communities; innovate business ideas based on protecting the environment; provide clean water and sanitation to people around the world; and work with

Newsletter submissions

Submissions may be sent electronically to:

Eric Marchand
marchand@unr.edu
(775) 784-6817
(775) 784-1390, fax

Letters to the president may be sent to:

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Civil & Environmental
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AEESP Newsletter online:

www.aeesp.org/publications_newsletter.php

AEESP Membership Application online:

www.aeesp.org/membership/AEESP_member_app.pdf



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pre-college students and teachers to engage young people in math, science, and technology. I am happy to say that it is not uncommon to now meet students who integrate policy with their technical foundation, speak a foreign language, travel around our country and the world providing environmental services to others in need, and challenge all of us on a daily basis to update our curricula and places of employment.

This past November, in my capacity as AEESP President, I was fortunate to meet one-on-one with NSF Director, Dr. Arden Bement. We discussed the importance of environmental engineering in NSF's overall research agenda and the role that environmental engineering played in NSF research related to the environment. One topic that consistently came up during our conversation was the realization of the increasingly global nature and complexity of today's environmental problems. Even the issues I mentioned at the beginning of this column related to water, wastewater, air, and waste management have become much more complex and global.

I believe that AEESP and its members must assume an even greater leadership role if the world is to attain a sustainable future. I know many of us are now remaking our classroom, curricula, research agendas, engineering designs, homes, and place of employment to achieve a sustainable future. I look forward to working with all of you this year so our discipline remains at the forefront of leadership in areas critical to the environment, society, and economy. If there is an issue that you think important to AEESP, please communicate it to me, one of our Board Members, or our committee chairs.

A handwritten signature in cursive script that reads "James R. Mihelcic".

James R. Mihelcic
President, AEESP

AEESP request for proposals for the 2009 AEESP Conference

Proposals are solicited from universities to host the 2009 AEESP annual conference. 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 and are intended to be balanced with respect to content on research and education.

Responders to this RFP should do so with the intent to host the conference in 2009. 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 (Rick Diz at Gannon University) of the conference planning committee as a single pdf file—send to DIZ001@gannon.edu.

The complete RFP is located online as a PDF document (http://www.aeesp.org/postings/AEESP_Conference_RFP-2009.pdf) and the proposals should be submitted by 1/30/08.

2009 Conference Planning Committee

Harry (Rick) Diz, Gannon University,
Chair

Kathy Banks, Purdue University
Jacimaria Batista, UNLV

Paige Novak, University of Minnesota

Dan Oerther, University of Cincinnati

Isabel Escobar, University of Toledo

Jeanne VanBriesen, Carnegie Mellon
University

Bill Cooper, University of California,
Irvine

Keri Hornbuckle, University of Iowa

Chuck Haas, Drexel University

2007 AEESP Awards Awards presented at the 2007 AEESP Conference in Blacksburg, VA, July 31, 2007

Awardee	Distinguished Service Awards for Outstanding Service
Mark Fitch	Chair of the Internet Resources Committee (2006)
Sharon Jones	Chair of the Demographics and Diversity Committee (2006)
Amy Childress	Chair of the Newsletter Committee (2006)
Dan Oerther	Liaison between the Association and WEF (2006)
Lynn Katz	Treasurer and Board Member and Inaugural Chair of the AEESP Foundation (2006)
Paige Novak	AEESP Board Member (2006)
Philip Singer	President and AEESP Board Member (2006)
Menachem Elimelech	AEESP Board Member (2007)
Kimberly Jones	Secretary and AEESP Board Member (2007)
Nancy Love	Chair of the Awards Committee (2007)
Gregory Boardman	Planning the 2007 Education and Research Conference (2007)
	Award Designation
Joan Rose	2006 Distinguished Lecturer (2006)
Cliff Davidson	AEESP/Wiley Award for Outstanding Contribution to Environmental Engineering and Science Education (2006)
George Tchobanoglous	Frederick George Pohland Medal (2007)

Awards presented at WEFTEC-07 in San Diego, CA, October 3, 2007

Awardee	Award Designation
Jeremiah Johnson ¹ Thomas E. Graedel ²	CH2M Hill/AEESP Outstanding Doctoral Dissertation Award: "Material Flows and Energy Use in Anthropogenic Metal Cycles," Yale University.
John Dyer Fortner ¹ Joseph B. Hughes ²	CH2M Hill/AEESP Outstanding Doctoral Dissertation Award: "C ₆₀ in Water: Aggregation Characterization, Reactivity and Behavior," Georgia Institute of Technology.
Guo-Ping Sheng ¹ Han-Qing Yu ²	CH2M Hill/AEESP Doctoral Dissertation Award – Honorable Mention: "Surface Characteristics of Microbial Aggregates in Wastewater Treatment Bioreactors," University of Science and Technology of China.
Simoni Triantafyllidou ¹ Marc Edwards ²	Montgomery-Watson-Harza Consulting Engineers / AEESP Master's Thesis Award, 1 st place: "Addressing and Assessing Lead Threats in Drinking Water: Non-Leaded Brass, Product Testing, Particulate Lead Occurrence and Effects of the Chloride to Sulfate Mass Ratio on Corrosion," Virginia Tech.
Arzu Atabek ¹ Terri A. Camesano ²	Montgomery-Watson-Harza Consulting Engineers / AEESP Master's Thesis Award, 2 nd place: "Investigating Bacterial Outer Membrane Polymers and Bacterial Interactions with Organic Molecules Using Atomic Force Microscopy," Worcester Polytechnic Institute.
Lutgarde Raskin	Frontier of Research Award
Joel G. Burken	McGraw-Hill / AEESP Award for Outstanding Teaching in Environmental Engineering & Science
Philip C. Singer	Founders' Award
Kim F. Hayes Gordon E. Brown, Jr. Keith O. Hodgson James O. Leckie George A. Parks A. Lawrence Roe	Outstanding Publication Award: K.F. Hayes, A. L. Roe, G. E. Brown, K. O. Hodgson, J. O. Leckie, and G. A. Parks (1987) In Situ X-ray Absorption Study of Surface Complexes: Selenium Oxyanions on α -FeOOH. <i>Science</i> , 238:783-786.
¹ Student	² Advisor

Many photos from this event were not recoverable; however, the AEESP Board of Directors would like to acknowledge those individuals who were able to attend: John Fortner, Joseph Hughes, Lutgarde Raskin, Joel Burken, and James Leckie.

2007 AEESP Awards



George Tchobanoglous (center) accepts the Frederick George Pohland Medal at the AEESP Conference from Larry Pencak (left, Executive Director of AAEE) and Phil Singer (right).



James O. Leckie (right) accepts an Outstanding Publication Award from Jim Mihelcic (left) and Amy Childress (center).



Greg Boardman (right) accepts a Distinguished Service Award from Phil Singer (left).



Kimberly Jones (center) accepts a Distinguished Service Award from Phil Singer (left) and Jim Milhelcic (right).

2007 AEESP Awards



Meny Elimelech (center) accepts a Distinguished Service Award from Phil Singer (left) and Jim Milhelcic (right).



Phil Singer (center) accepts a Distinguished Service Award from Jim Milhelcic (left) and Amy Childress (right).



Dan Oerther (center) accepts a Distinguished Service Award from Phil Singer (left) and Jim Milhelcic (right).



Lynn Katz (center) accepts a Distinguished Service Award from Phil Singer (left) and Jim Milhelcic (right).

2008 AEESP Award Nominations

The AEESP Foundation manages the numerous awards that our community presents for outstanding contributions to environmental engineering and science education and research. Nominations for these awards are now being accepted.

Award descriptions and nomination instructions are presented below. Instructions may also be found on the AEESP Foundation Web page (www.aeespfoundation.org), which also provides lists of prior award winners. All awards will be presented by the AEESP President or by a representative of the corporate sponsor for each award at the Meet-and-Greet reception of the 2008 WEFTEC conference in Chicago (October 19-22, 2008).

All nominations are due March 17, 2008, and should be sent (except Ph.D. and M.S. theses awards*) to the chair of the awards committee: Professor Jennifer Becker, Environmental Science and Technology Department, 1433 Animal Science/Ag. Engineering, Bldg. 142, University of Maryland, College Park, MD 20742-2315; e-mail: jgbecker@umd.edu; Tel: (301) 405-1179 [*Submission instructions for Ph.D. and M.S. theses nominations are provided separately below.].

AEESP Founders' Award

This award is given annually to recognize an environmental engineering or science professor who has made "sustained and outstanding contributions to environmental engineering education and practice."

Supporting documentation is required at the time of nomination. Nomination packages should include a full curriculum vitae for the nominee, a cover letter from the nominator, and at least two, but no more than five, additional letters of recommendation. Past nominations will be carried over and considered for three years; nominators are free to modify or enhance their nomination packages.

AEESP Outstanding Publication Award

This award is given annually to recognize the author(s) of a "landmark environmental engineering and science paper that has withstood the test of time and significantly influenced the practice of environmental engineering and science." At least one of the authors must be living and previous winners are ineligible for a period of three years.

Nominations must be made by individuals who are not authors or co-authors of the paper. Nominating letters (2-page maximum) should give the full citation of the paper, the reasons why the paper is considered a landmark, and a description of the influence the paper has had on environmental engineering and science. Nomination packages should also include at least two, but no more than five, additional letters of support. Past nominations will be carried over and considered for three years; nominators are free to modify or enhance their nomination packages.

Malcolm Pirnie/AEESP Frontier in Research Award

This award is given annually to recognize an environmental engineering or science professor who has advanced the environmental engineering and science field through recognized research leadership and pioneering efforts in a new and innovative research area. The selected recipient will receive a plaque and a cash prize of \$4,000. Malcolm Pirnie, Inc. also provides \$1,000 in travel allowance to be used by the recipient to attend the awards ceremony.

Nominators must send a supporting statement plus selected literature citations that clearly detail the nominee's contribution to the new and innovative research achievement for which the nominee is being honored. Supporting documentation is required at the time of nomination. Nomination packages should include a full curriculum vitae for the nominee, a cover letter from the nominator, and at least two, but no more than five, additional letters of recommendation describing the

pioneering efforts and innovative nature of the nominee's work. Past nominations will be carried over and considered for three years; nominators are free to modify or enhance their nomination packages.

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

CH2M Hill/AEESP Outstanding Doctoral Dissertation Awards

These awards annually recognize two outstanding doctoral dissertations that contribute to the advancement of environmental science and engineering. The awards will each consist of a plaque and a cash prize of \$1,500 for the student, and a plaque and a cash prize of \$500 for the faculty advisor. CH2M Hill, Inc. also provides \$750 as travel allowance to recipients who attend the awards ceremony. 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 pts), originality of the research (30 pts), contribution to advancement of environmental engineering (30 pts), and clarity of presentation (10 pts).

Faculty advisors are encouraged to nominate a dissertation completed under their supervision. The nominated dissertation should be submitted as a PDF file and sent by e-mail to: AEESP.PhD.Dissertation.Award@gmail.com. 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. Faculty advisors are urged to limit themselves to a single entry; self nominations by students will not be accepted.

The chair of the doctoral thesis review panel is: Jurg Keller, Advanced Waste-water Management Centre, University of Queensland, Brisbane 4072, Australia;

e-mail: j.keller@uq.edu.au.

AEESP thanks CH2M Hill, Inc. for their generosity in sponsoring this award.

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

This award annually recognizes the first and second most outstanding M.S. theses that contribute to the advancement of environmental science and engineering. 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 allowance to all recipients who attend the awards ceremony. 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).

Faculty advisors wishing to nominate a student for this competition should submit the thesis (as a PDF file) via e-mail to: AEESP.MS.Thesis.Award@gmail.com. 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. Faculty advisors are urged to limit themselves to a single entry; self nominations by students will not be accepted.

The chair of the master's thesis review panel is: Jordan Peccia, Yale University, Department of Chemical Engineering,

Environmental Engineering Program, P.O. Box 208286, New Haven, CT 06520; e-mail: Jordan.Peccia@yale.edu; Tel: (203) 432-4385.

AEESP thanks Montgomery Watson Harza for their generosity in sponsoring this award.

AEESP Outstanding Educator Awards

Two Outstanding Educator Awards are given, one for "Outstanding Teaching in Environmental Engineering and Science" and one for "Outstanding Contribution to Environmental Engineering and Science Education." These awards are given annually to recognize environmental engineering or science professors who are making outstanding contributions to the teaching of environmental engineering, both at the individual's home institution and beyond. A cash award of \$500 is supported in each category. Previous winners are ineligible for the same category.

The award for "Outstanding Teaching in Environmental Engineering and Science" is given annually to "honor a faculty member who has made substantive contributions directly through classroom-oriented teaching, as enhanced through the development of new pedagogical techniques." Although open to nomination at any rank, the award is intended primarily to recognize a demonstrated commitment to teaching early in a person's career. Preference is usually given to nominees who are at the assistant or associate level and have demonstrated success with the application of innovative teaching techniques, especially to undergraduate classes. The award is sponsored by McGraw-Hill.

The award for "Outstanding Contribution to Environmental Engineering and Science Education" is given annually 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." Preference is usually given to nominees who have both (1) developed and applied

innovative and improved teaching techniques and (2) disseminated these contributions to the educational community through appropriate and widely accessible means. This award is open to nomination at any rank. The award is sponsored by John Wiley & Sons, Inc.

Nomination packages should include a brief curriculum vitae (10-page maximum), a cover letter from the nominator, and at least two, but no more than five, additional letters of support. Supplemental supporting documents are welcome but not essential.

The Frederick George Pohland Medal

This award honors an individual who has made sustained and outstanding efforts to bridge environmental engineering research, practice, and education. 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 of up to \$1,000 for travel to the award ceremony.

Nominations must be made by members of AEESP and/or the American Academy of Environmental Engineers (AAEE). Supporting documentation is required at the time of nomination. Nomination packages should include a full curriculum vitae for the nominee, a cover letter from the nominator, and at least two, but no more than five, additional letters of recommendation. Past nominations will be carried over and considered for three years; nominators are free to modify or enhance their nomination packages.

AAEE and AEESP thank the Pohland family and other donors to the Fred Pohland Memorial Fund for their generosity in establishing this award.

In Memoriam...

Okun remembered for pioneering work in water resources engineering

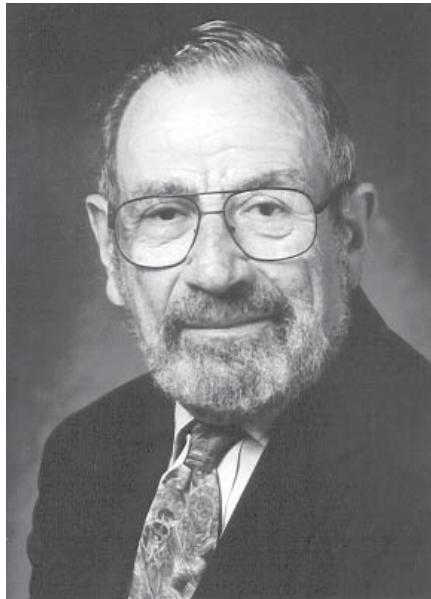
Daniel A. Okun, University of North Carolina at Chapel Hill Kenan professor of environmental engineering and Emeritus member of AEESP, died December 10, 2007. He was 90.

Okun was hailed worldwide for his groundbreaking work in identifying and protecting pristine water sources, water resources management, and water reclamation and reuse.

During his career, Okun worked in 89 countries and consulted with municipal and legislative planning committees throughout the United States. Among Professor Okun's many contributions, he helped design a water treatment plant in Bangkok, Thailand; helped establish a graduate program in sanitary engineering in Lima, Peru; and studied water supply and pollution control in China for the World Bank. At home in Chapel Hill, he led the campaign to build the Cane Creek Dam and Reservoir in the 1980s to ensure the highest quality drinking water source for Chapel Hill and the UNC campus.

"Dan Okun cared deeply about his school, his community, his state, and his world," said UNC School of Public Health Dean Barbara K. Rimer. "And he turned that commitment into action, whether through water projects or social action. Few professors have influenced more students, more professionals, or more policy decisions around the world than Dr. Okun. His work has influenced international policy-making for organizations like the World Bank, the United Nations, and the World Health Organization. There is nowhere I go that people don't talk about Dan with awe. Though he was retired, he was often at the School, talking to students and faculty colleagues. Dan was a model citizen/professor, and I am so glad to have known him."

Okun began his career at UNC in 1952 and served as Chair of the Department of Environmental Sciences and Engineering from 1955 to 1973. During his



time as Chair, the department grew from three to 25 faculty members. Although Dr. Okun retired from teaching in 1982, he remained actively involved in the profession through writing, lecturing, and consulting, until his death.

"Dan influenced generations of environmental engineers and public health professionals with his clear thinking and equal clarity of purpose," said Mike Aitken, chair of the School of Public Health's environmental sciences and engineering department. "His life's work on water supply, and more recently on water reuse, earned him an international reputation that few attain. His humanity equaled his professional stature—from his concern for safe drinking water in developing countries, to his engagement in local social issues, to his model service as an academic citizen at this University."

Okun was the first engineer from North Carolina elected to the National Academy of Engineering and later to the Institute of Medicine of the National Academies. He chaired the Water Science and Technology Board of the National Research Council from 1991 to 1994 and served on many committees

and councils of the U.S. Public Health Service, the World Health Organization, the Pan American Health Organization, and the National Academy of Sciences, among others. Among the many awards he received were the AEESP Founders' Award, AAEE's Gordon Maskew Fair Award, ASCE's Simon Freese Award, WEF's Gordon Maskew Fair Medal, AWWA's Abel Wolman Award of Excellence, EWRI's Lifetime Achievement Award, and IWA's Grand Award. In August 1999, *Engineering News-Record*, in celebration of 125 years of publishing, honored him as one of the top 125 engineers who "singularly and collectively helped shape this nation and the world."

"Dan was a pioneer who had a profound influence on scientific, technical, and policy advancements in the field of environmental sciences and engineering," said Philip Singer, who is currently the Daniel A. Okun Distinguished Professor of Environmental Engineering at UNC. "An engineer's engineer, he cast a giant shadow on the broad field of water supply and water resources management. While he will be greatly missed by the many students, faculty, and professionals with whom he worked at home and abroad, his legacy will live on among all engineers and scientists dealing with issues of water and health."

Okun celebrated his 90th birthday in June with a party at the Carol Woods Retirement Center, where he lived. More than 220 people came to offer warm wishes and celebrate the life of their friend and colleague.

"I believe Dan's greatest legacy will be this Department of Environmental Sciences and Engineering," Aitken said. "He transformed it from a traditional program in sanitary engineering to the multidisciplinary department we are today, at a time when this was unheard of. He was truly a man of vision who pushed us to excel even through this last year of his life. We will miss his wisdom; we will miss him."

For those who wish to honor Professor Okun's memory, the family requests that donations may be made to the Dan Okun Scholarship Fund in the School of Public Health at the University of North Carolina at Chapel Hill. Credit card donations may be made online at www.sph.unc.edu/make_a_gift. (Under *Gift Designation*, select *Other*, and enter *Dan Okun Scholarship Fund*.) Checks should be made to the Public Health Foundation and should indicate the name of the scholarship. The mailing address is UNC School of Public Health, Campus Box 7407, Chapel Hill, NC 27599-7407.

AEESP members and Safe Water Technologies highlighted at NAE Frontiers of Engineering Symposium

The National Academy of Engineering (NAE) sponsored the 2007 U.S. Frontiers of Engineering Symposium, September 24-26, 2007, on the campus of Microsoft Research in Redmond, Washington, highlighting a session titled "Safe Water Technologies." The Session was organized by Professor Paul Westerhoff from Arizona State University and Carol Rego from CDM. The invited speakers in the session were Karl Linden (University of Colorado-Boulder) speaking on "UV Disinfection: An Age-old Emerging Technology for Safe Water;" Amy Childress (University of Nevada, Reno) speaking on "Membrane Processes to Address the Global Challenge of Desalination;" Jess Brown (Carollo Engineers) speaking on "Biological Drinking Water Treatment: Benefiting from Bacteria;" and Vanessa Speight (Malcolm Pirnie Inc.), speaking on "Distribution Systems: The Next Frontier."

The U.S. Frontiers of Engineering Symposium is convened annually by the National Academy of Engineering. The program brings together outstanding engineers (ages 30-45) from industry, academia, and government to discuss pioneering technical work and leading-edge research in various engineering fields and industry sectors. Approximately 100



2007 NAE Frontiers of Engineering Safe Water Technologies Group. From left to right: Jess Brown (Carollo Engineers), Amy Childress (University of Nevada, Reno), Karl Linden (University of Colorado-Boulder), Paul Westerhoff (Arizona State University), Carol Rego (CDM), Vanessa Speight (Malcolm Pirnie Inc.). Backdrop: Slab from the Berlin Wall.

engineers attend each year's meeting, with about 45 from industry, 45 from academia, and 10 from government labs or other entities. Symposium attendees also included a number of AEESP members from academia and industry.

Those interested in viewing these presentations or any others from the 2007 Symposium (or past symposia) can access them via: www.nae.edu/frontiers. Go to "US Frontiers," then "Past Symposia," then "2007 Symposium," then "Presentations."

James Mihelcic standing by the solar hot water heating module at his home.



Mihelcic named to EPA advisory board committee

Professor James R. Mihelcic has accepted an invitation from EPA Administrator Stephen Johnson to serve a three-year appointment on EPA's Science Advisory Board Environmental Engineering Committee.

The Science Advisory Board provides scientific advice to the EPA administrator and several Congressional committees, including the Senate Committee on Environment and Public Works and House

Member News

of Representative Committees on Science and Technology, Interstate and Foreign Commerce, and Public Works and Transportation.

The board is comprised of scientists, engineers, and economists who are experts in their fields and are not employed by the federal government.

Mihelcic was a founding member of the Sustainable Futures Institute where he served as co-director for several years. He has directed the Master's International Program in Civil and Environmental Engineering since its creation in 1997. He is also a founding member of the Michigan Tech Engineering Development for Humanity "D80" Center that is dedicated to assisting the most vulnerable 80 percent of humanity in meeting their basic needs for food, water, shelter, sanitation, waste disposal, energy, income, and education.

He researches ways in which biological processes can be applied to natural and engineered systems, green engineering and sustainability, water scarcity and its impact on human health, and water/sanitation/hygiene issues of the developing world.

Mihelcic is a former American Association for the Advancement of Science-U.S. EPA Environmental Science and Engineering fellow, working in the Office of Underground Storage Tanks. He co-lead several research and education sustainability initiatives on campus including development of a new Graduate Certificate in Sustainability and an Undergraduate Certificate in International Sustainable Development Engineering. He has co-written one textbook, "Fundamentals of Environmental Engineering," and has led efforts to write two additional textbooks that will be available in 2008, "Water Supply, Sanitation Systems and Indoor Air Quality: Field Guide in Engineering for Development Workers" and "Environmental Engineering: Fundamentals, Sustainability and Design."

Hrudey elected Fellow of the Society for Risk Analysis

Dr. Steve E. Hrudey, Professor Emeritus



at the University of Alberta School of Public Health, has been elected as a Fellow of the Society for Risk Analysis, the fourth Canadian and one of only 80 members rec-

ognized in this manner since the formation in 1991 of this international, interdisciplinary society dedicated to risk science. Dr. Hrudey has retired from the University of Alberta on December 31, 2007, after 32 years of service. He will continue as Chair of the Alberta Environmental Appeals Board, a quasi-judicial tribunal appointed by provincial cabinet to hear appeals of regulatory decisions by the Alberta Environment Department.

Edwards awarded MacArthur Foundation Fellowship

Marc Edwards, AEESP President from 2003-2005, was awarded a 2007 MacArthur Foundation Fellowship. The award citation stated in part: "Melding rigorous science, concern for public safety, and dogged investigation, Edwards' recent work focused on the identification and analysis of lead contamination in the Washington, D.C. area's local water supply. In this research, he made the startling discovery that the addition of chloramine disinfectant (a new and widely used replacement for chlorine) in tap water actually increased the incidence of lead leaching in residential and commercial aqueducts, in many cases above acceptable EPA limits. He went on to link several cases of lead poisoning, earlier thought to be caused by lead paint, to local tap water. His findings also revealed systemic weaknesses in the regional water testing program, prompting the Washington Area Water Authority to replace lead service

lines throughout the district. Now expanding his focus to other cities, he is defining new and more effective ways to



test local water and predict the risk of chemical contamination in urban infrastructure. Through his exhaustive research efforts, Edwards is making critical contributions

to the health of individuals and communities throughout the U.S. in an often-neglected area of domestic public safety." The MacArthur Fellows Program awards unrestricted fellowships to talented individuals who have shown extraordinary originality and dedication in their creative pursuits and a marked capacity for self-direction. Each fellowship comes with a stipend of \$500,000 to the recipient, paid out in equal quarterly installments over five years.

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.

May 2008 issue submissions deadline

The submissions deadline for the May 2008 AEESP Newsletter is Tuesday, **April 1, 2008**. Send news items to:

Eric Marchand
AEESP Newsletter Editor
marchand@unr.edu

Membership application

The AEESP membership application is available online at: http://www.aeesp.org/organization/AEESP_member_app.pdf

Arizona State University

Dr. Rosa Krajmalnik Brown joined the



Department of Civil and Environmental Engineering at Arizona State University as an assistant professor in August 2007. Before assuming the faculty position, she

was a Postdoctoral Associate in ASU's Biodesign Institute, working in the Center for Environmental Biotechnology. She will continue to be part of the Center. Dr. Krajmalnik-Brown received her B.S. (1996) in Industrial Biochemical Engineering from UAM (Autonomous Metropolitan University) in Mexico City and her M.S. (2000) and Ph.D. (2005) in Environmental Engineering from Georgia Institute of Technology. Her primary area of research interest is biotransformation and fate of environmental contaminants, with an emphasis on environmental applications of molecular microbial ecology. Other areas of interest include bioremediation of soil, sediments, and groundwater and the use of microbial systems for bioenergy production. Dr. Krajmalnik Brown has special expertise in evolution of genes involved in biodegradation processes, gene expression, and application of molecular tools to evaluate and monitor environmental engineering systems. Her research has been published in *Applied and Environmental Microbiology*, *Environmental Science and Technology*, *FEMS Microbiology Ecology*, and *Environmental Microbiology*.

Rolf Halden, Ph.D., P.E., joined the Department of Civil and Environmental Engineering at Arizona State University in January of 2008. His research group, housed in the Center for Environmental Biotechnology at ASU's Biodesign Institute, seeks to advance public health and societal sustainability through the use of green chemistry and green engineer-



ing. Halden, who specializes in bioremediation and the mass spectrometric determination of chemical and biological contaminants, is best known for his work on the occurrence of organohalogenes, pharmaceuticals, and personal-care products in U.S. water resources, along with associated body burdens in humans. The Biodesign Institute's organizational structure complements his multi-disciplinary research that explores the connection between anthropogenic activities, environmental quality, and human health. Current work concentrates on structural attributes of persistent manmade chemicals, the genomic and proteomic characterization of microbes feasting on toxic pollutants, and the development of in situ microcosm arrays for enhanced environmental monitoring and remediation. Prior to joining ASU, Halden was Associate Professor of Environmental Health Sciences at the Johns Hopkins Bloomberg School of Public Health.

University of California, Irvine

Diego Rosso joined the



Civil and Environmental Engineering Department at the University of California, Irvine in January 2008. Dr. Rosso is a Chemical Engineering Laureate from the University of Padua (Italy) and has a Ph.D. in environmental engineering from UCLA. His research expertise is centered on environmental process engineering, including biological wastewater treatment, mass transfer, aeration, and economic

analyses of wastewater processes. Lately, his research activities have focused on carbon- and energy-footprints of wastewater treatment processes, carbon-sequestration, and energy-conservation in wastewater unit operations. Dr. Rosso has also been an active member of Engineers Without Borders for the past four years.

University of California, Riverside

David M. Cwiertny joined the faculty in the



Department of Chemical and Environmental Engineering at the University of California, Riverside (UCR) as an assistant professor in July

of 2007. Prior to joining the faculty at UCR, Professor Cwiertny completed his Ph.D. in 2006 in the Department of Geography and Environmental Engineering at Johns Hopkins University, where his research focused on the application of zero-valent iron and iron-based bimetallic reductants for the treatment of groundwater contaminated with halogenated organic solvents. David then completed post-doctoral research in a joint appointment between the Departments of Chemistry and Civil and Environmental Engineering at the University of Iowa, where his work focused on the reactivity of nanoscale iron oxides. He also has a B.S. in Environmental Engineering Science from the University of California, Berkeley. His research interests are related to environmental chemistry, with an emphasis on pollutant fate and transport in natural and engineered aquatic systems.

Member News

Johns Hopkins University

Dr. Seth Guikema joined the faculty of the Department of Geography and Environmental Engineering at the Johns Hopkins University in January 2008. Dr. Guikema received his Ph.D. from Stanford Uni-



versity in Management Science and Engineering in 2003, and has experience as an assistant professor with the Civil Engineering Department at Texas A&M University. Dr. Guikema's research area involves risk and reliability assessments of environmental engineering systems. His skills in statistics, stochastic modeling, decision theory, and applied economics are being applied to problems of infrastructure restoration after natural disasters, prioritization of technologies for mitigating the environmental impacts of oil and gas production, and transportation asset management. For more information, please visit www.engineering.jhu.edu/~dogee/.

University of Massachusetts, Amherst

The Department of Civil and Environmental Engineering at the University of Massachusetts at Amherst welcomes **Chul Park**, who joined the faculty in September 2007 as an assistant professor. His research and teaching are focused on biological processes, especially as related to wastewater treatment.

Chul received a B.S. in Environmental Engineering from Yeungnam University (Kyungsan, Korea) in 2000. He then went to Virginia Tech where he earned both his M.S. (2002) and Ph.D. (2007) in environmental engineering. While at Virginia Tech, Chul was an instructor for an introductory environmental engineering course.

Dr. Park's graduate research fo-



ocused on the role of metals and extracellular polymeric substances in bacterial aggregation in the activated sludge wastewater treatment process. He has also worked in the area of sludge digestion and biosolids handling. Other research interests include metaproteomics and metagenomics in complex environmental microbiota as well as membrane technologies for water and wastewater treatment. Dr. Park teaches Environmental Engineering Principles and Biological Processes in Environmental Engineering.

The Department of Civil and Environmental Engineering at the University of Massachusetts at Amherst welcomes **Erik Rosenfeldt**, who joined the faculty in September as an assistant professor. His research and teaching examines physical and chemical technologies for contaminant treatment in drinking water and water reuse applications.

Erik received a B.S. (1999) in chemical engineering from Washington University in St. Louis, and continued working as an environmental consultant in the St. Louis area. He received both his M.S. (2003) and Ph.D. (2007) in environmental engineering from Duke University, examining the ability of UV and UV/H₂O₂ to degrade Endocrine Disrupting Compounds (EDCs) in water. He was also a visiting researcher and instructor at North Carolina State University in 2006 and 2007, investigating bacterial regrowth in drinking water distribution systems and teaching Environmental Behavior of Organic Contaminants.

Dr. Rosenfeldt's research focus utilizes UV photochemistry and advanced oxidation technologies in drinking water and water reuse applications. Of particular interest is using these techniques to oxidize emerging biologically active contaminants

of concern,



with the ultimate goal of reducing their activity. Additional interests include utilizing and developing methods to quantify the oxidative strength and biological stability of drinking waters, to aid in treatment process optimization. Dr. Rosenfeldt teaches Physicochemical Treatment Processes and Environmental Engineering Principles.

University of Michigan

Dr. Nancy Love will start her appointment as Professor and Chair of the Department of Civil and Environmental Engineering at the University of Michigan in January 2008. Formerly with Virginia Tech,



Love will continue her research on wastewater treatment systems and environmental health applications. She specifically studies the role of molecular stress responses on physiological and structural adaptation of microbial communities or mammalian cells exposed to chemical perturbations, biosensor development, microaerobic and anoxic metabolisms, biodegradation of xenobiotic compounds including pharmaceuticals, and nutrient removal processes. Prior to her academic career, she worked in the Wastewater Reclamation Department of CH2M Hill, Inc. Among several other research and teaching awards, Love received the Inaugural Paul L. Bush Award for Innovation in Applied and Water Quality Research from the Water Environment Research Foundation. She was a co-Principal Investigator and Advance Professor for a National

Science Foundation Advance Institutional Transformation grant to increase the participation and advancement of women in academic science and engineering careers. She also serves on the Board of Directors of AEESP. Love received her B.S. and M.S. degrees from the University of Illinois at Urbana-Champaign and her Ph.D. from Clemson University.

University of Pittsburgh

Dr. Willie Harper has joined the faculty



in the Department of Civil and Environmental Engineering at the University of Pittsburgh. Dr. Harper received a B.S. degree in civil engineering from the Uni-

versity of California, Los Angeles, and a M.Eng. degree in civil and environmental engineering from Cornell University. After five years of engineering practice with CH2M Hill, Inc., Dr. Harper received a Ph.D. in civil and environmental engineering from the University of California, Berkeley, where he studied enhanced biological phosphorus removal with Dr. David Jenkins. Before joining the University of Pittsburgh, Dr. Harper served on the faculty at Auburn University, where he was honored with the outstanding junior faculty award in 2007. Dr. Harper is also a recipient of the prestigious National Science Foundation Early Faculty CAREER award. Dr. Harper is a licensed professional engineer in the state of Arizona, and he has authored or co-authored 25 journal articles, conference proceedings, and book chapters.

Dr. Harper's research interest is biological processes. His primary interest is in engineered systems, such as biological wastewater treatment processes, but he also studies natural systems such as wetlands and estuaries. Most of the ongoing work is focused on the fate and effects of emerging water contaminants, including

(among others) synthetic steroids and antibiotics. Dr. Harper's recent work has revealed very specific removal mechanisms, and has also shown a wide range of microbial responses to these chemicals. Dr. Harper is also investigating the production of microbially-synthesized antibiotics in engineered bioreactors. Dr. Harper is active in youth mentoring and a variety of community outreach programs.

Amy E. Landis, Ph.D., joined the De-



partment of Civil and Environmental Engineering at the University of Pittsburgh in the fall of 2007. Dr. Landis earned her Ph.D. from the University of Illinois at

Chicago in their Department of Civil and Materials Engineering and the Institute for Environmental Science and Policy and brings her expertise in sustainable engineering to the University of Pittsburgh. Her recent research into the environmental implications of biobased production has been highlighted in *Environmental Science and Technology* news and a feature article. As a previous Fulbright Scholar, Environmental Protection Agency Scholar, and science advisor to Chicago's Notebaert Nature Museum, Dr. Landis has an exceptional track record of successful and innovative interdisciplinary collaborations which will no doubt prove beneficial for the Mascaro Sustainability Initiative in the School of Engineering. Dr. Landis' expertise in sustainable engineering, alternative fuels and bioproducts, and life cycle assessment complements the department's commitment to sustainability research. She will be developing the department's sustainability curriculum and will be an important contributor to the department's new Center for Sustainable Transportation funded by PennDOT.

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, May, 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.

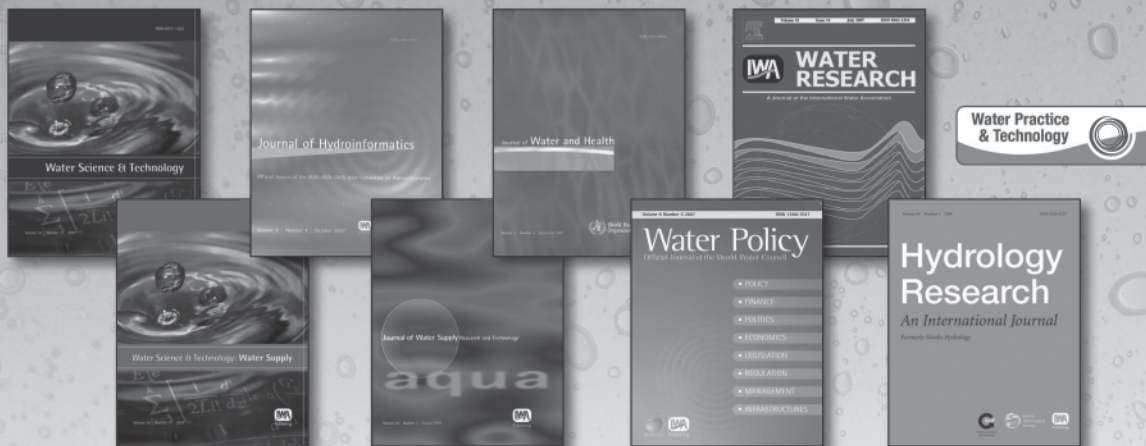
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Photo submissions

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

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Responsibility

by P. Aarne Vesilind, Bucknell University



One of the more interesting questions discussed in any engineering ethics course is what ethical responsibility engineers have to the public when they do not have legal responsibility. The question is even more complicated when students wonder if they, even before they receive their engineering degrees, are morally responsible for holding paramount the health, safety, and welfare of the public.

Actually, the answer is not that difficult. Any profession, be it law or medicine, or engineering, empowers the individual with special talents that benefit the public, and the wise use of these talents for the public good is expected. To do otherwise is to be professionally immoral.

An example, which I used in my ethics classes, is a student intern who recognizes that a small earthen dam appears unsafe, and then finds that the owner has not obtained the necessary permits from the state. Is it the professional responsibility of this intern to inform the state of the permit violation? Yes it is, because the intern, even with an incomplete engineering education, is able to determine that the dam is unsafe – a knowledge that the “man on the street” does not possess. It is this knowledge, to be used for the public good, that differentiates the intern from others, and burdens him or her with another layer of ethical responsibility.

But there is also a fuzzy line between moral responsibility and legal responsibility. To take the above example further, suppose for the sake of argument the intern, recognizing the unsafe condition of the dam, asks the owner to sign a statement absolving him or her of all legal responsibility in case the dam does break and does cause death and destruction. With this paper in hand, would the intern then be off the professional hook?

This was the question confronting T. Chalkley Hatton, an interesting man who was one of the early sanitary engineers, rubbing professional elbows with the likes of Greeley, Hanson, Eddy, Mohlman, and Hazen. Hatton’s career, however, had a severe bump in the road, caused by the failure of the Austin Dam, a fascinating story of greed and mismanagement.

As described in the article by Tom Rich (“Lessons in Social Responsibility from the Austin Dam Failure,” *Int J of Eng Ed*, 22:6:1287-1296, 2006), the story begins with the construction of a paper mill on the banks of Freeman Run, a small creek in the Susquehanna watershed in north central Pennsylvania. The owner of the mill, one George C. Bayless, kept expanding the mill and by the year 1910 over 200 workers from Austin were employed at the plant. Further expansion of the mill was

restricted by the uneven supply of water in the small creek, and Bayless decided to build a dam that would provide a sustained supply of water for his pulping operations. He hired T. Chalkley Hatton, a civil engineer based in Wilmington, Delaware, to design the dam. Hatton’s dam was to be a gravity-type concrete structure, 544 feet long and expected rise 45 feet above the creek elevation. The reservoir was to hold 200 million gallons of water.

From the beginning, the relationship between the owner, Bayless, and the engineer, Hatton, was a rocky one. While Hatton wanted to build a dam according to prevailing engineering standards, all Bayless wanted was to earn some money. He often overrode design specifications and even ended up ignoring Hatton by having the site engineer change the design parameters without telling the home office. For example, Bayless got the engineer to eliminate a valve for a 36-inch drain pipe that would allow for the release of water in an emergency. Instead of the valve on the downstream side of the dam, the drain pipe was blocked by a cap on the upstream side, under water. Hatton explained to Bayless that this would make the use of the emergency line quite difficult, but Bayless did not want to spend the money for the valve. The original design had a cutoff wall, designed to prevent seepage under the dam and preventing the dam from sliding on its foundation. The owner argued that the dam was built on solid rock and thus the cutoff wall was not necessary. Finally, the owner, without consulting Hatton, changed the final elevation of the spillway by adding two feet of freeboard.

The exasperated engineer finally wrote to Bayless on November 1, 1909:

Last night I received a telegram from Mr. Rommel, [the site engineer] stating you desired to raise the spillway for the dam, two feet, and asking for instructions today. I have made a computation of the structure, based upon increasing the height of the water two feet, and I find that it would be dangerous to the stability of the structure to increase the height of the water above what we have provided, and I send you a little sketch, showing wherein it would be dangerous. ... I, therefore cannot recommend to you any increase in the height of the water above what has already been provided, and cannot make any changes to the dam, unless you instruct me to do so over your written signature, thus relieving me of all responsibility.

The dam, in its clearly unsafe state, was completed in 1909. Two months later, a sudden thaw caused the water to flow over the spillway, and during an inspection of the site, Hatton observed several large cracks in the face of the dam. Two sections of the concrete dam had actually slid about 30 inches, creating a bulge in the dam. Hatton immediately notified the townspeople, and went about trying to relieve the pressure on the dam. But the 36-inch emergency line could not be opened



T. Chalkley Hatton

because there was no valve, so they dropped a charge of dynamite into the water at the general location of the pipe and blew the cap off the pipe. What this did to the subsequent integrity of the dam itself is unknown.

The immediate catastrophe averted, the objective now was to fix the dam. Hatton contacted Edward Wegmann of the New York Aqueduct Commission and the two of them wrote a study in which they agreed that the dam

was unsafe and needed to be strengthened. Specifically, they recommended that stone and rubble be piled up against the downstream side of the dam, thus reducing the chances of failure by slippage, and a proper cutoff wall be built to bedrock. Having written the report, Hatton washed his hands of the whole project, and Bayless, the owner, ignored the recommendations.

During the summer of 1911 water was again allowed to collect behind the structure, and by September 30, 1911 the water had reached spillway height. On that day, the lumber mill, located between the dam and the town, was working at capacity and the people of Austin were going about their business unaware of the impending disaster. Suddenly at 2:15 in the afternoon the factory whistle blew, warning the town that there was a problem. Some people ran for higher ground, while many ignored the whistle as another false alarm. Shortly after the whistle, a huge wave of water and logs from the mill surged through the town, destroying homes and businesses, leaving the town utterly destroyed. On that sunny afternoon, 78 people lost their lives and several thousand lost everything else.

After the disaster, the magazine *Engineering News* sent an investigator to the site, and his report, based on the location of various sections of the broken dam, clearly showed how the dam had slid off the foundation. The technical reasons for the dam failure were easy to determine, but the human reasons were more complicated. To his credit, T. Chalkley Hatton took the blame for the disaster. He wrote in *Engineering News* ("Austin Dam and Its Failure" *Engineering News*, 68:14:605-607, 1912):

The failure of this dam was not the result of poor workmanship, but poor judgment upon my part in determining its foundation. I should have sought the advice of a man more skilled in determining foundations for dams than myself.... The great mistake I made in building this dam was trusting the rock foundation to be impervious.

In the article Hatton did not blame George Bayless, the owner, and recognized that the fault was his for not insisting

that the dam be safe. He apparently was absolved of legal responsibility, and there is no record of his being sued for damages or being booted out of the ASCE. In fact, Hatton went on to become a respected sanitary engineer, including serving a term as the president of the American Society for Municipal Improvement (the forerunner of the American Public Works Association) and becoming the chief engineer of the sewage commission for the city of Milwaukee. In that capacity, he also helped to write a dictionary of terms used in sewage treatment (J. F. Skinner, G. B. Gascoigne, J. H. Gregory, T. C. Hatton, F. W. Mohlman, and W. L. Stevenson "Definitions for Sewage and Sewage Disposal Practice" *Am J Public Health* 15: 327-334, 1925).

Today we would conclude that Hatton did not act in a proper way, and that he abrogated his professional responsibility by "washing his hands of the entire project." We now know that an engineer cannot walk away from professional responsibility when the knowledge that the engineer possesses can reduce potential harm to the public. There is, for all of us, regardless of our circumstance or position, the admonition to hold paramount the health, safety, and welfare of the public.





Opposite page: The Austin Dam during the winter of 1910-11. Note the severe bow in the dam alignment. The two men up front are unidentified, but one of them could well be T. Chalkley Hatton.

Above: Austin, Pennsylvania, before (top) and after (bottom) the disaster.

[Photos courtesy of the Potter County Historical Society. Used with permission.]

University of Buffalo

The University at Buffalo has established a new interdisciplinary graduate curriculum in ecosystem restoration. The Ecosystem Restoration through Interdisciplinary Exchange (ERIE) initiative is a collection of academic programs designed to advance the science, engineering, and policy of ecosystem restoration. Generous student support packages are available for all qualified applicants, including Ph.D. traineeships through the NSF IGERT program (U.S. citizens or permanent residents only). Interested applicants should apply to one of the seven participating graduate programs in Civil (environmental) Engineering, Biology, Chemistry, Geography, Geology, Philosophy, or (Native) American Studies. For more information contact Prof. Alan J. Rabideau (rabideau@buffalo.edu) or visit: <http://www.erie.buffalo.edu>.

California Polytechnic State University

WATER RESOURCES ENGINEERING position at CALIFORNIA POLYTECHNIC STATE UNIVERSITY (CAL POLY), San Luis Obispo, California. The Civil and Environmental Engineering Department invites applications for a tenure-track faculty position at the rank of assistant professor in the areas of hydraulics and groundwater engineering. Exceptionally well-qualified candidates will be considered at the rank of associate professor. Responsibilities include teaching undergraduate, graduate, and laboratory classes, supervising research, and developing an externally funded applied research program. Professional registration, industrial/consulting experience is highly desirable.

The position is available September 10, 2008. Review of applications will begin January 26, 2008. To apply, please visit www.calpolyjobs.org, complete a required online faculty application, and submit it to requisition #101092. For full consideration, please attach to the online application: (1) a cover letter with a brief statement of teaching and research interests, (2) a detailed resume, and (3) undergraduate and graduate transcripts (unofficial). Short-listed candidates will be required to submit three letters of recommendation. In lieu of electronic attachments, any of the required documents may be sent to the following address: Chair of the Search Committee, Civil and Environmental Engineering Department, Cal Poly, San Luis Obispo, San Luis Obispo, CA 93407-0353.

The Civil and Environmental Engineering Department at Cal Poly has programs in civil engineering and environmental engineering at both the B.S. and M.S. levels and is widely known for its "learn by doing," laboratory-intensive curriculum. Both undergraduate programs are ABET accredited and highly regarded. The department currently has 22 full-time faculty members, 18 part-time faculty, and 900 students.

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University of Colorado, Denver

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ASSISTANT/ASSOCIATE PROFESSOR IN ENVIRONMENTAL ENGINEERING: The Department of Civil Engineering at the University of Colorado, Denver invites applications for a tenure-track

assistant professor position to commence August 2008. The position focuses on chemical or biological processes in environmental engineering; specialization in water/wastewater treatment is preferred. The Department of Civil Engineering offers B.S., M.S., and Ph.D. degrees for both full-time students and working professionals. The department is presently leading an NSF IGERT grant described at www.cudenver.edu/IGERT. More information is at: <http://thunder1.cudenver.edu/enveng>.

The new faculty member will be expected to teach at all levels of environmental engineering and establish an active, externally funded research program. Applicants must hold an earned Ph.D. in civil/environmental engineering, or a closely related field, by August 2008. Prior teaching experience, field experience, and professional engineering registration are valued. Exceptional candidates may be hired at an appropriately higher academic level.

Interested candidates should apply electronically at www.jobsatcu.com (refer to job posting #802906) by submitting a cover letter, curriculum vitae, and the names, affiliations, phone numbers, and e-mail addresses of three references. Also attach a one-page statement of teaching philosophy and a one-page research plan as "other documents." For more information, contact anu.ramaswami@cudenver.edu.

Application review will begin February 15, 2008 and will continue until the position is filled. The University of Colorado is committed to diversity and equality in education and employment. Women and individuals from under-represented minority groups are strongly encouraged to apply.

Environmental Engineers of the Future

This funding program is sponsored by a consortium of nationally recognized public and private sponsors that employ environmental engineers with advanced degrees. Funding of up to \$20,000 for

one year of study is provided to students pursuing a Master of Science degree in environmental engineering at pre-approved universities. To qualify, students must be currently enrolled in a qualified undergraduate program and complete an engineering undergraduate degree in either civil, environmental, chemical, mechanical, or other applicable engineering field. Upon graduation, students seek employment with the sponsoring firms/agencies of their choice for at least a 3-year period. The second application acceptance period for the 2008/2009 academic year will be open from January 1 through February 15 to fill any remaining funding positions. For more information, please go to <http://www.engineeringmastersfunding.org/index.html>.

Gonzaga University

ASSISTANT PROFESSOR OF CIVIL ENGINEERING. Gonzaga University seeks applicants for an assistant professor of civil engineering. This is a full-time, tenure-track faculty position to begin September 2008. A Ph.D. in civil engineering, environmental engineering, or equivalent, is required. Applicants should have educational and/or professional experience in one or more of the following broad areas of civil engineering: sustainable design, transportation, engineering management, geo-environmental and geotechnical, or water resources. Candidates with professional experience and/or demonstrated success in undergraduate teaching are preferred.

For the complete position announcement see: www.gonzaga.edu/humanresources.

Review of applications will begin January 10, 2008. Applications will be accepted until the position is filled. Send an application letter, complete curriculum vita, a statement of research and teaching objectives, and the names, addresses, and telephone numbers of at least three references to: Noel E. Bormann, P.E., Ph.D., Chair, Department of Civil Engineering, Gonzaga University, E. 502 Boone Ave., Spokane, WA 99258-0026. Electronic

Employment / Study Opportunities

submissions in PDF format can be sent to: bormann@gonzaga.edu.

Gonzaga University is a Catholic, Jesuit, and humanistic university interested in candidates who can contribute to its distinctive mission. The University is an AA/EEO employer and educator committed to diversity.

Illinois Institute of Technology

ASSISTANT PROFESSOR OF CIVIL ENGINEERING. Illinois Institute of Technology, Department of Civil, Architectural and Environmental Engineering invites applications for a tenure-track assistant professor position starting August 2008. The department seeks an individual with an outstanding academic record and dedication to excellence in teaching and research. Applicants must demonstrate the potential to lead and attract funds for a high caliber research program. The candidate must have a Ph.D. in civil/environmental engineering and preferably a B.S. degree in civil engineering. We are particularly interested in engineers who want to benefit from our proximity to the Great Lakes and Chicago Waterways by investigating interactions between water quantity and quality issues. We are seeking individuals with research interests to complement the existing faculty in environmental engineering and collaborate with other faculty and institutions. The candidate will be expected to teach undergraduate and graduate courses in chemical and biological aspects of water and/or air quality engineering. Candidates with current professional engineering license or qualifications to obtain licensure in Illinois are preferred.

To apply, please send a resume, statement of research and teaching interests and plans, copies of pertinent publications, and the names of three references to Prof. Krishna Pagilla by e-mail at pagilla@iit.edu or by regular mail to: Chairman, Faculty Search Committee, Department of Civil, Architectural and Environmental Engineering, Illinois Institute of Technology, 3201 S. Dear-

born Street, Suite 228, Chicago, Illinois 60616.

For further information, contact: Professor Krishna Pagilla at (312) 567-5717 or pagilla@iit.edu.

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University of New Hampshire

Ph.D. FELLOWSHIPS IN SUSTAINABLE ENGINEERING. The University of New Hampshire is pleased to announce the availability of Ph.D. fellowships in the area of sustainable engineering. Doctoral fellows will receive competitive compensation packages along with individual research accounts in their first year that may be used for travel and other scholarly purposes. Five new fellows will be selected for a summer or fall 2008 matriculation. Doctoral fellows are guaranteed funding during the entirety of their tenure at the University of New Hampshire provided sufficient progress is being made toward their degree.

Additional information about the faculty and research programs of the Environmental Research Group can be found at: <http://www.unh.edu/erg/>. Prospective applicants are encouraged to complete electronic applications to the graduate school which can be found at: <http://www.gradschool.unh.edu/>.

Interested applicants should contact: Kevin H. Gardner, Director, Environmental Research Group; kevin.gardner@unh.edu; (603) 862-4334.

University of Washington

SUSTAINABLE WATER RESOURCES AND WATER QUALITY ENGINEERING. The University of Washington's Department of Civil and Environmental Engineering invites applications for a tenure-track faculty position in sustainable water resources, which includes but is not limited to the development of sophisticated engineering tools to understand the hydrologic cycle and its effects on water supply and quality, and of appropriate technologies to alter the quality of water to accommodate its intended use.

University of Washington faculty engage in teaching, research, and service. The candidate should have interest in interdisciplinary problems that will draw on strengths in water quality and treatment, hydrology, water resources, and other related fields within the department and across the university. The position will be at the rank of assistant professor tenure eligible, but may be at the rank of associate professor or full professor depending on the qualifications of the applicant.

The candidate will have earned a Ph.D. by the September 2008 start date. Preference will be given to candidates with a Ph.D. in civil engineering or related fields who can acquire civil engineering or environmental engineering professional registration. The department has 30 budgeted faculty, over \$12 million in active research grants, and enrolls 175 graduate and 225 undergraduate students.

Applicant review will begin January 7, 2008 and continue until the position is filled. Applicants should provide a complete resume, along with a one-page teaching philosophy statement, a one-page research philosophy statement, and contact information for three references. All application materials should be submitted at <https://www.engr.washington.edu/facsearch/>.

The University of Washington is building a culturally diverse faculty and strongly encourages applications from female and minority candidates. The University of Washington is the recipient of a 2006 Alfred P. Sloan Award for Faculty Career Flexibility and a 2001 National Science Foundation ADVANCE Institutional Transformation Award to increase the advancement of women faculty in science, engineering, and math (see www.engr.washington.edu/advance). The university is an Equal Opportunity, Affirmative Action Employer and is responsive to the needs of dual-career couples.

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