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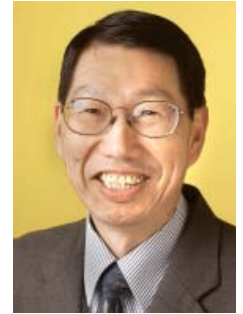
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Message from the Chair



The year 2006 marked a continued growth of the CEE Department. Following the recent approval of the bachelor of science degree program in Environmental Engineering by the New York State Education Department, the CEE Department initiated a new concentration in Architectural Engineering. The incoming undergraduate students increased by more than 50% in fall 2006 and now the Department has over 250 undergraduate students. In the graduate program, the department has nearly 50 full-time graduate students in M.S., M.E. and Ph.D. programs.

Both the Environmental and Environmental Health and Civil Engineering Ph.D. programs of the department are ranked this year in the top third nationally by *U.S. News & World Report*. Our faculty members continue to have success in their professional activities as reflected by the hosting of the POAC and AEESP conferences on campus and by having five faculty members currently on the editorial boards of national and international professional journals. Our research activities extend beyond northern New York to Canada, Europe, Asia and Antarctica. These research activities provide opportunities to our students to gain domestic as well as international research experiences in both undergraduate and graduate levels.

The Department continues to rely on the generous financial gift support of our alumni and friends, as well as corporations to enhance our laboratory facilities and improve the quality of education of our students. We greatly appreciate your support.

The Department is in the process of developing a strategic plan for the next five years and we have recently gained input from our advisory council members. Please feel free to send us your input and ideas about what we should do to continue our goal of "Evolution to Excellence."

Professor and Chair
Department of Civil & Environmental Engineering



New Program in Architectural Engineering

A professional concentration in Architectural Engineering (AE) is now available for Civil Engineering (CE) majors. The concentration requires CE447 Reinforced Masonry and Timber Design, CE448 Introduction to Architectural Engineering, CE492 Senior (Building-Architectural) Design, as well as foundation engineering and structural design courses in concrete and steel. Additionally, students working toward the AE concentration are required to select two courses from a list of recommended electives that include construction, advanced structural and thermodynamic system design, CAD, industrial ecology and environmental health. Twenty-five students took CE448 the fall 2006 semester and six students among the CE seniors are pursuing the AE concentration. Students satisfying the requirements of the AE concentration will receive a Dean's Certificate at the time of their graduation with their bachelor's degree in Civil Engineering.

CEE Welcomes New Faculty



Narayanan Neithalath, Ph.D.

Civil & Environmental Engineering welcomes Dr. Neithalath as assistant professor. Narayanan joined Clarkson from Middle Tennessee State University where he was teaching after completing his Ph.D. from Purdue University in 2004. He obtained his master's degree from the Indian Institute of Technology, Madras, and has worked in R&D divisions of cement and construction chemical manufacturers. His research interests lie in the general area of cement and concrete materials with emphasis on material characterization techniques, high porosity cementitious systems, and concrete durability. He taught a new course on Properties and Performance of Concrete Materials in fall 2005, and another new course on Structural Damage in spring 2006. Dr. Neithalath received the 2005 Outstanding Young Author Award from the International Society of Concrete Pavement.

Brooks Washburn, Architect, PC

Civil & Environmental Engineering welcomes Brooks Washburn as adjunct associate professor. Brooks has practiced architecture since 1981 as a licensed architect in New York and California. His prior extensive experience includes design and project management as project architect with a 25-member architecture firm in San Diego, California, from 1979-84 and teaching and research experience overseas as a professor of architectural engineering from 1984-91. Brooks received his education at Princeton (BA, '75) and Harvard ('79) and spent one year as an exchange scholar in Cambridge, England.



Professor Ackley Has Point in Antarctica Named in His Honor

Stephen Ackley, adjunct research professor, was recently notified of the U.S. Board on Geographic Names approval of the Antarctic geographic name Ackley Point following the recommendation of the Advisory Committee on Antarctic Names (ACAN). Individuals' names are assigned based on the level of a person's contribution to Antarctic research or history, and on the type of geographic feature. The U.S. Board on Geographic Names states ... "[Ackley] is a sea ice specialist who worked in McMurdo Sound and diverse parts of the Southern Ocean for more than 25 years."

Gift to the CEE Department



Professors Gordon Batson and Narayanan Neithalath.

A new electro-hydraulic concrete testing machine was purchased from the income of the Clarridge Endowment Fund for the Civil & Environmental Engineering Structures Laboratory. The new testing machine replaces an old hydraulic concrete cylinder testing machine and will be used by undergraduates in concrete materials courses and in research projects by graduate students. The Clarridge Endowment Fund was established by children of Professor Charles Clarridge, who graduated from Clarkson in 1930 with a bachelor's degree in Civil Engineering and a master's degree in 1931. He was a faculty member from 1931 until his retirement in 1973, except for four years as a naval officer during WWII.

The new testing machine replaces

Expedition in the Ross Sea

Margaret A. Knuth started her association with Clarkson when she participated in our REU China Marine Science and Engineering Program the summer before her senior year at the University of Miami. She then came to Clarkson as a graduate student in CEE, doing research on sea ice. Last year, she participated in an expedition in the Ross Sea, Antarctica, taking sea ice observations while also helping scientists from the International Whaling Commission and many other international researchers on the ship. Knuth has most recently been working on relating remote sensing sea ice data with in-situ measurements from the ship and helicopter observations and just came back from the International Glaciological Society conference in New Zealand where she presented this recent work.



Margaret A. Knuth

She has been awarded an NOAA John A. Knauss Marine Policy Fellowship

(one of 45 in the whole country). In February 2006, she started working for one year at the National Science Foundation (NSF) Office of Polar Program as a Knauss Fellow.



Professors Holsen and Hopke and Ph.D. Student Xiaoyan Xia in the Center for Air Resources Engineering & Science lab measuring a wide range of bioaccumulative toxic chemicals in Great Lakes fish.

\$1.75 Million EPA-Funded Great Lakes Fish Analysis

Identifying the concentration levels of harmful pollutants, such as mercury or PCBs, in freshwater lake fish is necessary for public health officials to develop appropriate and protective fish consumption advisories.

Professor Thomas Holsen is collaborating with a team of fellow researchers from Clarkson, as well as scientists and engineers from SUNY Fredonia and SUNY Oswego on a project to provide chemical analysis of Great Lakes fish tissue. The research is funded by a \$1.75 million grant from the U.S. EPA Great Lakes Fish Monitoring Program. The goal of the five-year project is to assess accurate levels of mercury, PCBs, dioxin and other harmful chemicals in lake fish.

“The project will analyze approximately 110 samples per year,” explains Holsen, who is the principle investigator for the project. “In addition to the samples, the team will analyze quality control samples consisting of a homogenate of Great Lakes lake trout that contains known amounts of pollutants. We’ll also conduct a broad gas chromatography to mass spectrometry (GS/MS) scan to identify currently unmeasured pollutants in the fish. Our findings should also yield evidence so the scientific community can more accurately assess the risks of contaminants found on the health of the fish population itself and the wildlife that consumes them.”

POAC Conference 2005 Held at Clarkson

In June 2005, more than 100 engineers, scientists and designers of ships and arctic structures met at Clarkson University for the 18th International Conference on Port and Ocean Engineering under Arctic Conditions (POAC '05). This conference was chaired by Professor John Dempsey. POAC serves as a scientific and technical conference independent of any particular organization or commercial interest. Held every two years, the conference took place for the first time in the continental United States. Regions with arctic conditions range world-wide from the Great Lakes of the United States and Canada to the Arctic and Antarctic Seas, the North Sea, the Baltic Sea, the great lakes of Sweden, the Bering Sea, and the Hudson Bay. The conference included presentations on aspects of climate modeling, global change, heat budget analyses, forecasting ice conditions for ice breakers and ship navigation, the opening of the Northern Sea Route, ice loads on fixed and floating structures, submarine surfacing, aircraft landings, winter ice-surface transportation, and ice mechanics dealing with intact ice.



Associate Deans Amy Zander and Susan Powers

AEESP 2005 Conference Held at Clarkson

In July 2005, the Clarkson Center for the Environment held the 2005 Research and Education Conference of the Association of Environmental Engineering and Science Professors (AEESP). At the four-day conference were some 250 of the world's preeminent science and environmental engineering scholar-educators and graduate students to network over issues as part of the conference theme "Pushing the Boundaries: Making Research and Education in Environmental Engineering and Science Count." Environmental sustainability emerged as a real conference theme, with many universities presenting how they are incorporating the topic into their curricula. The conference planning committee was co-chaired by professors Susan Powers and Amy Zander.

"Best Poster Presentation"

Andrea Ferro earned a first-place award for "Best Poster Presentation by an Assistant Professor." The poster described her work with Peter Jaques, an assistant professor in the Department of Biology, on the assessment and communication of personal exposures to diesel exhaust near the Peace Bridge, a major U.S./Canada border crossing in Buffalo, New York.

Professor Ferro has also been elected to a three-year term on the Board of Directors for the American Association for Aerosol Research.

Summer Research Experience for Undergraduates

REU in Environmental Engineering and Science

Since 1998, the U.S. National Science Foundation has provided funding for a summer undergraduate research program. Program components include the research project, skill-focused workshops, team-building activities, and a culminating research symposium. In 2002, we added a weekly seminar and related activities focused on environmental sustainability to provide a unifying theme for the Clarkson REU Site Program that would provide the connecting threads among students' research projects. The participants are high-achieving students; the majority (70%) of students that participated in the program pursued a graduate education. Approximately 30% of the students published their research either at a national conference or in the form of a peer-reviewed journal publication.

REU in China on Marine Science and Engineering

Each summer, 15 top students from U.S. universities across the country are selected to travel to China to spend 10 weeks working closely with Chinese scientists and graduate students on research projects related to marine science and engineering at Dalian University of Technology and Ocean University of China.

Launched in 2000, the program is a National Science Foundation's (NSF) Research Experience for Undergraduates

Andrea Ferro earned a first-place award for "Best Poster Presentation by an Assistant Professor" at the AEESP 2005 Conference.



(REU) Program. The REU-China Program was recently selected by the American Association for Advancement in Science (AAAS) as one of the best REU Programs. Professor H.T. Shen commented, "We are very pleased with the outcome of our program. Most of the past participants pursued graduate study. Many of them published papers based on their REU research and participated in other international educational experiences. It is a clear indication of the high quality of the program itself and the exceptional quality of the students' research."



REU in China program participant Halimatu Mohammed '06 (right) and one of her student co-researchers from Dalian University of Technology.



The first-place CURE Team in Washington, D.C., with Senator Hillary Rodham Clinton.

Environmental Design Team Wins USDA Award

Senator Hillary Rodham Clinton met with students from Clarkson University's Remediation Engineering (CURE) team in Washington, D.C., to congratulate them on being recognized as one of the top student environmental design teams in the country. The CURE Team won first place and \$2,500 in its category at the 15th Annual Environmental Design Contest sponsored by WERC. At the contest, which was held in Las Cruces, N.M., the team was also the co-recipient of the USDA (United States Department of Agriculture) Award given to student teams who exhibit excellent team performance. The students were in Washington, D.C., to present their results to USDA officials.

The P3 team who received an EPA-winning grant for biodiesel study.



P3 Team Wins "Biodiesel" Grant

Four Clarkson students have received a \$10,000 grant from the U.S. Environmental Protection Agency (EPA) for the proposal they submitted for the EPA's P3 Award program grant. P3 is a partnership between the public and private sectors to achieve the mutual goals of economic prosperity while protecting the natural systems of the planet and providing a higher quality of life for its people. Through the partnership, grants are provided to teams of college students to research, develop and design sustainable solutions to environmental challenges.

CU & North Harbor Dairy on Dairy Waste to Energy

The idea of converting dairy waste to energy is catching on in upstate New York. Five Clarkson faculty members – Drs. Grimberg, Powers (environmental), Pillay (electrical), Thacher (mechanical), and Welsh (sociology) – have been collaborating with North Harbor Dairy, a 500-head dairy farm, and design engineers to build an anaerobic manure digester. The digester will convert waste material to electric energy that could be used at the farm. In addition, the digested manure will have a high nutrient value and can be used to offset fertilizer cost. Research will focus on improving the digester performance, determining the environmental impact of the entire manure management system, and optimizing heat and power generation given demands at

the farm. The project is funded by NYS, USDA, DOE and NYSERDA.

Two students working at a dairy farm as part of the state-funded bioenergy project.



Alumni News

Terry Brown '72 has been named to the Clarkson University Board of Trustees. Terry is the president and CEO of O'Brien & Gere, an engineering and product delivery company based in Syracuse with offices around the world.

Bob Oust '51 and his wife, Ronnie, have been married 54 years. They have traveled different places for the winter months, including Hawaii, Florida and the Algarve coast in Portugal. They are now living in Tucson, Arizona.

Norman R. Schneider '67 is the executive director of Railroads of New York Inc. RONY represents the freight railroad industry in New York state, including 35 freight railroad members and 26 affiliated businesses. Norman was selected for this position by RONY's board of directors after retiring from New York state government after 36 years. He and his wife, Linda, live on Saratoga Lake. They have two grown children and two grandchildren.

Bruce Rydebeck '70 and his wife, Cherith, completed 25 years of service with HCJB World Radio as missionary volunteers. Bruce and Cherith live in Ecuador where Bruce serves as the director of Clean Water Projects for Desarrollo Comunitario Vozandes, an arm of HCJB.

Bill Shusda '70 retired from NYSDOT in 2003 after 30 years of service in the Rochester, New York, office. He now works for Collins Engineers inspecting overhead traffic signs in western New York.

Peter J. Fadden '71 MS, '74 is the senior project manager for the Central Dutchess Water Transmission Line Project for the Dutchess County Water and Wastewater Authority.

Dennis Weller '71, president/CEO of Structural Associates Inc. located in Syracuse, serves on the National Executive Committee of the Associated Building Contractors of America.

Bob Washer '72 says that February 2005 turned out to be a double bonus for the Washer household! Bob was promoted to executive vice president and general manager of MICCO Construction, located in Pontiac, Michigan (www.miccoconstruction.com), while daughter Jill and husband John Gaylord presented them with their first grandchild, Tyler Anthony, on February 11.

Craig R. Doolittle '75, MS '76, is a senior program manager with the ENSR Corporation of Westford, Massachusetts. He was promoted to manage ENSR's Source Testing Department.

Ted Totten '75, president of Cives Steel Co.'s Northern Division, was recognized by ENR as one of the Top 25 Newsmakers for 2006, for ensuring precision through collaboration on Manhattan's 42-story Hearst Building. This project was highlighted as the cover story in the October 2005 issue of *ENR*.

Bob Cohen '76 started with General Electric as a marketing trainee and became a sales engineer for four years and lighting engineer for two. He has traveled the world extensively to many third-world countries. Bob started his own export business in 1992 and has been selling equipment since then.

Carl F. Morey '76, P.E., has been a senior project oversight manager for the USDOT-Federal Transit Administration for the last six years. Carl oversees the planning of FTA-funded major capital projects including the \$517 million Dallas Area Light Rail Rapid Transit System expansion, the \$185 million Trinity Railway Express (the first commuter railroad in the State of Texas), and NYC-MTA major capital projects including the \$6.2 billion LIRR East Side Access commuter line expansion into Manhattan.

Rex Niles '76 has been appointed president and CEO of F.L.A. Orthopedics, a medical manufacturing company located in Miramar, Florida, in March 2005.

John Pavan '82 co-founded The Northbridge Companies based in Burlington, Massachusetts (www.northbridgecos.com), a family of companies concentrating in senior-oriented housing.

William J. Cunningham '88 has joined Siefert Associates, LLC in Naugatuck, Connecticut, as project engineer. William lives in Bristol with his wife, Jeanne, and his children Rachel (9 yrs. old) and Ryan (3 yrs. old). He may be reached at gugsbilly@aol.com.

Lynnette Bristol Carney '89, MS '91, works part time as a project manager in the municipal water and wastewater group at Dufresne-Henry in Manchester, New Hampshire. She has a son and two daughters ages eight, five and 18 months.



Gronka Bjedov '91, Ph.D., has moved to Google after spending seven years teaching at Purdue, where she was an associate professor.

James (Jay) Pellegrino '92 was promoted to general superintendent for MWH Constructors on the Cape Coral Facility Expansion Program, a \$500 million plus program expanding the capacities of two existing wastewater plants, an existing RO water plant, and building a new RO water plant and a new wastewater plant.

Greg Corso '93, P.E., has been promoted to partner at CHA, in Albany, New York. He is also manager of the Utilities Business Unit in the firm's Facilities and Energy Division.

Teresa Boepple '94 is chair of the Education Committee, New York Section of AWWA (American Water Works Association).

Bill Walsh '95 celebrated 10 years of service at CATLIN Engineers and Scientists in Wilmington, North Carolina, and recently accepted a transfer to manage the newly opened Raleigh Collaboration Office.

Susan Frankenstein '96, Ph.D., and **Mark Hopkins '88**, Ph.D., met Professor H.T. Shen and Research Associate Tomek Kolerski during their recent visit to Cold Regions Research and Engineering Laboratory (CRREL). Mark is a research physicist and Susan is a research civil engineer at CRREL.

Cory R. Lamb '97, P.E., has been promoted to associate for CHA, in Deland, Florida. Cory has been a highway engineer with CHA's Transportation Division for nine years. He is a licensed P.E. in New York, Florida and Georgia.

Kevin Graves '99 has become a licensed professional engineer in the states of Minnesota and Iowa while working for WHKS & Co. Engineers in Rochester, Minnesota.



Pray



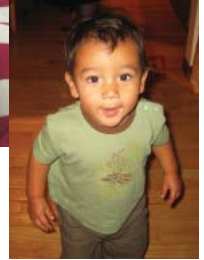
Kerr



Skaarup



Devoid



Tuthill

Stephen Titus '99 is project engineer/owners rep. in the new FBI field office in Chicago. He competed in the 2004 U.S. Olympic Rowing Trials – Men's Double Scull. Steve is head coach at Loyola Academy prep school in Chicago for the freshmen girls' crew team.

Jian Hu '05, Ph.D., joined GeoEngineers, which is based in the Seattle, Washington, area.

New Additions to the Alumni Family

Owen Randall Pray, born December 2005, son of **Randall '00** and **Lee '00 Pray**.

David Kerr '95, '98, and his wife, Sandra, with their first child, Alexander T. Kerr, born November 19, 2005.

Colin Riley Skaarup, born December 16, 2005, with brother Ethan. Colin and Ethan are the sons of **John Skaarup '95** and his wife, Pam.

Rebecca Rose Devoid, born January 17, 2005. Proud parents are **Wayne '98** and **Michelle (Boschen) '98 Devoid**.

Jasper Tuthill, son of **Susan Frankenstein '96**, Ph.D., and Andy Tuthill.



Shen Recognized for River Ice Research

Professor H.T. Shen delivered the keynote lecture, "A Trip Through the Life of River Ice," at the IAHR International Ice Symposium held at Sapporo, Japan, in August 2006. He was also invited by the Hokkaido Civil Engineering Research Institute to give a short course on river ice in December.

Shen was also recently selected by the International Association of Hydraulic Engineering and Research (IAHR) as the recipient of the IAHR Ice Research and Engineering Award in recognition of his many outstanding technical contributions in the field of Ice Engineering. He will receive the award at the next IAHR International Ice Symposium in Vancouver.



Shen's past awards include the Harold R. Peyton Cold Regions Engineering Award and the CAN-AM Civil Engineering Amity Award of American Society of Civil Engineers (ASCE) in 2000, and the Larry Gerard Medal of Canadian Geophysical Union (CGU)-Hydrology Section in 2001.

Shen has collaborated with many international ice researchers including researchers from the U.S., Canada, China, Japan, Germany, Poland and Scandinavian countries. Shen introduced the analytical framework for river ice processes. He also developed the transport capacity theory for frazil ice jams (hanging dams) and the theory on ice jam dynamics, and improved rheological formulations for river and sea ice dynamics. His research group has developed comprehensive computer models for river ice processes. These models have been applied to rivers world-wide, including rivers in Norway, Japan, Germany, China, Canada and the United States.



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