PUCEAO
CIVIL ENGINEERING ALUMNI ORGANIZATION
NEWSLETTER • SUMMER 1998

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PRESIDENT'S MESSAGE
Patrick J. Watters '92 '95

Like any other group, NUCEAO has a formal constitution that outlines our structure and objectives. Although it is quite a run-on sentence, (obviously written by engineers) Article II articulates our purpose as an organization. It states:

"The purpose of the organization shall be to assist civil engineering students and to expand the capabilities and resources of the Northeastern University Student Chapter of the American Society of Civil Engineers, the establishment of a mutually beneficial relationship between Northeastern University and the Alumni and Students of the Civil Engineering program, and the perpetuation of fellowship among the members of the Organization."

In reflecting upon what today's marketing groups would call a mission statement, I began to ask myself how well have we done in the past few years to live up to our founding purpose.

"Assist civil engineering students... expand the capabilities and resources." Every year you, as a NUCEAO member, have assisted civil engineering students with individual scholarships of $1000 each. In the past four years alone, you have helped 19 well-rounded civil engineering juniors with their education through your contributions. Also, through NUCEAO, your support has purchased a new computer for the student chapter office, provided financial support each year for the students' concrete canoe and steel bridge competitions, financed portions of their community service projects, attendance at regional and national conferences and more.

"Establish a mutually beneficial relationship between the University, Alumni and Students." At our luncheons and annual meeting in April, we intermingle with the students and faculty in a social setting. This helps to maintain existing ties and establish new ones. The students see that they will become part of a greater group upon graduation. As Alumni, we see that the civil engineering program is still alive, well, and just as strong as it was when we graduated several years before. Northeastern students benefit from your support and we in turn can take pride in the excellence that you help maintain through NUCEAO.

"perpetuation of fellowship among members of the Organization

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1998 NUCEAO Outstanding Alumnus Louis Guerriere '58 (center) with Mohammed Al-Naib '93, (left) and Mishac Yegian, Department Chair, Civil & Environmental Engineering, at annual alumni dinner. Photo by Emile Troup '62.
STEEL BRIDGE
The 1997 Steel Bridge Competition is here and gone. The bridge is judged on aesthetics, lightest weight, construction time, and load-carrying ability. NU was unable to go to the competition on November 15 due to bad weather. However, we did have our own competition in November in Dockser Gym. The Steel Bridge Competition consists of design, fabrication, and loading a 20' model bridge. Our Steel Bridge Construction team constructed the bridge in 24 minutes. Special thanks to Frank Davis of Precise Fabricating and our very own David Whelpley for their assistance with the fabrication.

![Part of the Steel Bridge Construction & Design Team](image)

COMMUNITY SERVICE
Spontaneous Celebration
During the Spring Quarter, our Chapter finished the design and construction of the 1996 - 1997 Community Service Project, a Community House in Jamaica Plain. The project consisted of the complete transformation of an existing asphalt parking area to a yard with grass, flowers, and a gravel driveway. This project was a great learning experience for all. Special thanks to all who helped out with this project, especially Jim Cahill & Phil Bonano of J.F. White Contracting Co.

Freedom Trail
During the summer, the Mayor's office sent us a letter requesting our aid in producing a map of the Freedom Trail that better accommodates handicapped people in wheelchairs. Since mid-July, our student chapter has been working with Wentworth's ASCE Chapter, and the Commissioner of Disabled Resources to come up with an alternate route to the attractions along the Freedom Trail that are not readily wheelchair accessible. To experience the difficulty of some sections of the Freedom Trail, we traveled the trail in wheelchairs. In order to provide a difficulty level of sections on the map, we took surveying grades of the steeper sections of the trail. We completed both the written description of our proposed alternative routes and the pictorial map for these portions, which are currently under review by the commissioner.
Fenway Garden Society

The 1998 Community Service Project involves the entire revamping of a plot in the Fens owned by the city of Boston, and managed by the Fenway Garden Society. The Chapter is re-designing a plot to be handicap accessible. This project includes: site development, design and construction of raised and depressed flower beds, and the design and construction of a handicap accessible path. Design for this project is already underway and we hope to complete construction by the end of August. Most workdays will be on weekends and will be posted on our website. Please check out our web page or email us for more information.

CONCRETE CANOE

This year’s Concrete Canoe competition was on the cold waters of Lake Champlain in Burlington, Vermont. Tabula Rasa, the 1998 entry, finished in fifth place overall. This year’s group decided to split the project into the following teams: Mix Design, Mold Design, and Report/Presentation Team. During construction all teams worked together to build the canoe. Special thanks to Christopher Duncan of Boston Sand & Gravel and to Richard Reade of Liberty Architectural Sales for donating materials to the canoe. Also thanks to Terry Cassidy of J.F. White Contracting Company for donating the mold (old wooden canoe) for this year’s canoe. Thanks to NUCEAO and the Department of Civil & Environmental Engineering for their support with the canoe as well. Congratulations to everyone that helped with this event, and we can not wait until next year’s competition.

INFORMATION SUPERHIGHWAY

Join us on the Information Super Highway and check out our homepage. The homepage has current information about the Weekly Lecture Series, BSCES Technical Dinners, Field Trips, Community Service Projects, Steel Bridge, Concrete Canoe, 1998 ASCE National Convention Important Links and much, much more. Our address is http://www.coe.neu.edu/~nuasce. Your suggestions and comments are welcome, you can email us at nuasce@coe.neu.edu.
Dr. Akram Alshawabkeh joined our full-time faculty in September. He received his Ph.D. in geotechnical engineering from Louisiana State University in 1994. After working in industry for two years, he was a visiting professor at Polytechnic University in Brooklyn. His research area is in electrochemical soil treatment, a method that is used for decontamination and stabilization.

He presented two papers in October. The first was presented at the “In Situ Remediation of the Geoenvironment” specialty conference, ASCE 1997 National Convention, Minneapolis, Minnesota, October 5-8, 1997. The second was presented at the 12th Annual Conference on Contaminated Soils held at the University of Massachusetts, Amherst, October 20-23, 1997.

Professor Jack Cochrane presented a paper in October at the National Conference of the Water Environment Federation, Chicago, entitled “Functional Utilization of the World Wide Web on the Internet”.


Professor Furth, who is on sabbatical at Delft University of Technology in Holland, gave two presentations at the Transportation Research Board’s annual meeting in Washington in January: “Innovative Sampling Plans for Estimating Transit Passenger-Miles,” and “New Concepts in Transit Priority.”

Professor Furth began a $25,000, 15-month project for the Transportation Research Board’s Transit Cooperative Research Program to write “Synthesis of Practice” on the subject “Data Analysis for Surface Vehicle Planning and Monitoring.”

Professor Furth attended INTER-TRAFFIC, Western Europe’s largest trade show for traffic and transportation suppliers to learn about new developments in intersection control, bus priority, and transit data analysis. It was held in Amsterdam.

Professor Fernando Miralles-Wilmot will spearhead a project titled “Development of a Joint Graduate Educational Program between Fundacion Gran Mariscal de Ayacucho (FGMA) and Northeastern University”, funded by FGMA, a government agency in Venezuela in charge of university level education. This funded project will provide NU with $23,000 per year per student in all fields of study offered by NU. Professor Miralles will recruit prospective students, and provide guidance and academic support to incoming students through this program.

Professor Miralles will be presenting a paper at the American Geophysical Union (AGU) meeting in Boston on May 26-29 titled “Numerical Modeling of Oxygen-Limited Biodegradation in Heterogeneous Aquifers using a Particle-Based Approach.”

Professor Sheahan received a $141,716 research grant from the National Science Foundation for a project titled “A New Experimental Approach Toward a Unified Theory of Time-Dependent Consolidation”. His partner in this research is Don DeGroot from UM Mass Amherst.

Professor Sheahan had a paper published in Marine Georesources and Geotechnology titled “Laboratory Determination of Coastal Sediment Mechanical Properties”, by Sheahan and DeGroot. Work was originally done by grad student Ilana Alvarado.

Professor Tillman co-chaired the Cooperative Education Association National Conference at the Boston Park Plaza Hotel in March. Over 400 cooperative education professionals attended the five day conference.

Professor Tillman was a panelist for the presentation “Managing the Engineering Consulting Firm in the Next Millennium: Profile of Future Engineers” presented as part of National Engineers Week.