

**ENVIRONMENTAL ENGINEERING PROGRAM
ANNUAL REPORT SUMMARY
2008-2009**

STUDENTS AND GRADUATES

The Environmental Engineering (ENVE) Program has 14 M.S. and 13 Ph.D. graduate students and 55 undergraduate ENVE majors. Several other undergraduates from the School of Engineering and other colleges pursue a minor in ENVE. The vast majority of graduate students are full-time and financially supported. During the year, the ENVE Program graduated three M.S. and one Ph.D. students and 11 environmental engineering undergraduates. A total of 37 graduate applications were received: of these, 21 were offered admission into the program and 10 have accepted admission, bringing our projected total of graduate students to 33 for fall 2009. In addition, one post-doctoral researcher is associated with the ENVE Program.

FACULTY

Detailed activities of the ENVE faculty can be found in the annual reports of their home departments. However, as an indicator of their high level of collective scholarly activity it can be mentioned that the core of the ENVE faculty (i.e., those with primary appointment in the Department of Civil & Environmental Engineering) published 42 journal articles, authored 19 full-paper conference proceedings, and made almost 41 presentations during this past year.

The ENVE Program welcomed two new faculty members this year. Drs. Tim Vadas and Alexander Agrios (CEE) joined UConn from the University of Maryland, Baltimore County and Uppsala University in Sweden, respectively. Dr. Vadas received his PhD from Cornell University and has expertise in the role of plants in facilitating transport and remediation of metals in environmental systems. He also has a background in sustainable design and carbon budgets. Dr. Agrios received his Ph.D. from Northwestern University and has expertise in the applications of nanoparticulate semiconductors to solar energy conversion. Dr. Nelly Abboud (CEE) is continuing on long-term disability leave for a third year.

Across the program, external funding continues to be strong, with research expenditures of nearly \$570,000 and more than 43 active intramural and extramural grants totaling more than \$2.5 million (core ENVE faculty only), including prestigious national research awards such as NSF Early Career Development (CAREER) and NASA New Investigator Program (NIP) Awards. Our ENVE faculty hold many positions of administrative authority. Dr. Kenneth Noll of Molecular & Cellular Biology (MCB) is Chair of the graduate program in Microbiology. Dr. John Clausen (NRME) is co-Chair of the Environmental Sciences program. Dr. Baki Cetegen, Head of Mechanical Engineering (ME), is a member of the Combustion Institute's executive board and a Fellow of the American Society of Mechanical Engineers. Dr. Glenn Warner (NRME) is the Director of the Connecticut Institute of Water Resources. Dr. Michael Willig (EEB) is the Director of the Center of Environmental Sciences & Engineering. Dr. Amvrossios Bagtzoglou (CEE) has made a transition from the Environmental Engineering Program Director to the Head of the Civil & Environmental Engineering Department. Dr. Guiling Wang (CEE) is the new Director of the Environmental Engineering Program.

Dr. Emmanouil Anagnostou (CEE) serves on NASA's Tropical Rainfall Measuring Mission peer review committee and the International Precipitation Conference Steering Committee. Dr. Bagtzoglou (CEE) is a member of the AGU Hydrology Section Groundwater Technical Committee, the ASCE Groundwater Hydrology Committee, the IAEG Commission 14 (Underground Disposal of Waste), and the Science and Technical Advisory Committee for the EPA Long Island Sound Study. Dr. Thomas Torgersen (Marine Science) holds the positions of editor-in-chief of *Reviews of Geophysics*, associate editor of the *Geochemical Journal*, editor of *Water Resources Research*, and member of the AGU Board of Journal Editors. Drs. Anagnostou, Wang, Bagtzoglou, Gebremichael, and Liu (all of CEE) serve as associate editors for the *Journal of Applied Meteorology*, *Journal of Geophysical Research – Biogeosciences*, *Stochastic Environmental Research and Risk Assessment* and *Inverse Problems in Science & Engineering*, *Atmospheric Research*, and *Journal of*

Environmental and Engineering Geophysics, respectively. Dr. Xiusheng Yang (NRME) serves as editor-in-chief for *Advances in Agricultural Science and Technology*. Dr. Mekonnen Gebremichael (CEE) serves as UConn's representative to the Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI). Dr. Bagtzoglou was elected to membership with the Connecticut Academy of Science and Engineering (CASE).

At the international level, Dr. Anagnostou (CEE) serves as an advisor to the National Observatory of Athens. As in previous years, the ENVE faculty had significant involvement in international conferences, including the AGU Fall and Spring Meetings and numerous other international conferences. In addition to more than 60 multi-disciplinary proposals submitted this year, our faculty continued developing several new international research proposals with colleagues from Denmark, Israel, Greece, France, Italy, Ethiopia, and the United Kingdom.

STAFF

The ENVE Program assistant, Ms. Althea Lozefski successfully completed her probationary year.

OUTREACH

Several ENVE faculty participated in many outreach activities and events for the undergraduate program. These activities included school career fairs, the Engineering 2000 summer program, the ENGR 1000 environmental workshop, the Northeast Regional Science Bowl, the Connecticut Invention Convention, and visits to high schools throughout the state. Dr. Allison MacKay (CEE) continues to be involved with the Society of Women Engineers student chapter. The program was well represented at the fall and spring open houses. Drs. Bagtzoglou and Gebremichael (CEE) worked closely – as primary and secondary advisors, respectively – with the newly formed UConn chapter for Engineers without Borders (EWB).

PROGRAM

The undergraduate ENVE Program attained official accreditation in October of 2008. The ENVE program participated in a variety of important activities at the University and School levels: the National Research Council survey, high-profile fundraising events (e.g., IBM, Hamilton-Sundstrand, Connecticut Department of Environmental Protection, XEROX, U.S. Department of Homeland Security), the Provost's Academic Plan Committee, and the Interdepartmental Courses & Curriculum Committee. The weekly seminar series continues to be a success, as evidenced by high and steady attendance. It is a forum that fosters interactions and enhances visibility.

Significant participation of ENVE faculty and students in national and international conferences, high-profile publications in archival journals and book chapters, professional accreditation, and involvement in seminars and collaborative research continue to offer the ENVE Program national recognition and respect.