The Survey

Virginia Military Institute Civil and Environmental Engineering

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VMI Flexes its Muscles at 2011 ASCE Virginias Conference

-LTC Chuck Newhouse

Morgantown, W.V. – This past April, 18 cadets participated in the annual ASCE Virginias Conference held in Morgantown, W.V. It was a good year for VMI, with the concrete canoe and the survey teams placing 2nd overall and the steel bridge team placing 3rd overall. The steel bridge team also placed first in the aesthetics category.

Loading the canoe and the steel bridge took place after DRC on Thursday. A requirement that the concrete for the canoe had to be less than 70 pcf ensured that there were no hernias to be had. COL Mullen and his wife Mrs. Cindy Mullen then lead the entourage out of Lexington, using his trusty Ford to haul the shrink-wrapped canoe and the neatly packed steel bridge.

That night at the high-class riverfront hotel, the steel bridge team, cadets Hilber, Walker, Gately, Ingold, and Godsey, found good use of a vacant hallway to practice assembling their bridge. The canoe team, cadets Allard, Carlos, Stecher, Rhodes and Brock, confident of their canoe, almost certainly retired early in preparation for the next day's swamp test.

The survey team, lead by Dr. Bob Brown, left early for the campus of WVU for their competition. An athletic bunch lead by VMI football players Church and Barnson, the team used cadet Bates and the Wells twins to confound and confuse the competition. Meanwhile, at a lake outside of town, cadet Hilber took charge, using his charm and West Virginia home field advantage to sweet talk the judges into getting the aesthetic portion of the competition started.

The canoe easily passed the swamp test and headed for the races. The team faced strong winds and a Fairmont State team who has won every canoe competition in recent years. As the boats took to the water, things changed quickly. The Fairmont State boat, attempting to catch up at the finish line in one of its races, suddenly snapped in half. Could this be VMI's year to claim first place? As quickly as their hopes were raised, the Fairmont State team concluded that a killer log had lunged from the depths of the lake and struck their boat, causing it to snap in half. Although no killer log was observed or ever found, the judges allowed the Fairmont State team to tape their canoe and continue in the competition.

Not to be bothered by an unfortunate ruling, VMI enjoyed a good lunch and a breezy afternoon.

The next day, the steel bridge team was chosen to be first to assemble their bridge. A large number of bolts caused the time to be a little high, but the final product was impressive. The bridge didn't move under the lateral load test, and deflected only about 3/8" under the total load test. A great year!

Duties required a few cadets to come home to barracks that night. Lead by LTC Newhouse, this group experienced their first "down on the farm" Bob Evan's meal next door to a combination beauty pageant/antique car show.

Against stiff competition from thirteen schools throughout Virginia, West Virginia, and D.C., the VMI teams performed well and, most importantly, displayed good sportsmanship. I would like to thank the department and the financial support from the Burke family that make these trips possible.

MacDonald Wins Scholarship

John McDonald recently won a scholarship from the Virginia Chapter of International Concrete Repair Institute. The scholarship is given out each year to a bachelor's and master's student from one of the participating schools in the state of Virginia. To win the scholarship he had to write an essay on how to repair three different structures with damaged concrete. He was given pictures of the situations but was required to research what went wrong with the concrete and find techniques to repair the concrete. John did extensive research on his own and came up with the best solution of all the students that entered from the engineering schools in Virginia.

New Faculty

Major Matthew Swenty grew up in Missouri and went to University of Missouri-Rolla for his bachelors and Masters degree. When asked to describe himself, Major Swenty said " I worked at the HBE Corporation designing hospitals and then designed bridges for the Missouri Department of Transportation. Through my experience I gained a love for structural engineering and in particular bridges. After gaining a few years of experience and getting my PE license I headed to Virginia Tech for graduate school. In graduate school I studied structural engineering and did research on precast bridge components. Once graduating I went to work as a contractor at the Turner-Fairbank Highway Research Lab in Mclean, VA. While there I helped research a number of bridge topics. During this period I always had a desire to obtain an academic job that would allow me to work with students. After interviewing at VMI I felt like it would be a great school where I could continue pursuing my professional interest but also working with students.

In my spare time, my wife and I have enjoyed a number of activities. We have worked with Big Brother's Big Sister's, our church youth groups, and XA Christian Fellowship while at Virginia Tech. We

also made a number of really good friends while volunteering at the Cranwell International Center working with English conversation groups. Traveling is one of our favorite past times whether on a weekend hike in the Blue Ridge Mountains or a trip overseas. We also enjoy being active and continue running road races and occasionally a mountain bike race."

VMI-CEE Establishes a New Engineers Without Borders Chapter

The Mission of the Virginia Military Institute Chapter of Engineers Without Borders (VMI-EWB) is to combine the efforts of interested students in all majors in a collaborative effort to enhance the living conditions of developing areas worldwide. Through this effort, VMI Cadets will increase their global perspective, work as a team to design and implement sustainable engineering and humanitarian solutions to poverty, and gain hands on experience applying their skills and talents towards the common good. The Goal of the VMI Cadets is to provide interested cadets with the opportunity to apply their diverse academic backgrounds to real-life situations for the benefit of those lacking basic human needs, such as clean drinking water and basic medical care

Cadets will work together to design and implement sustainable engineering, medical, environmental, and economical projects to help impoverished communities become healthier and more self-sufficient. The VMI-EWB club offers members the opportunity to design these projects on campus during the school year, at which point students travel abroad during the summer for the implementation of the designs.

Jackson Hope Grant awarded to CEE Professor

The Dean recently announced that MAJ Tim Moore of the Civil and Environmental Engineering Department with MAJ Anne Aldering of the Biology Department will receive grants from the Jackson-Hope Grants for New Directions in Teaching and Research Program. The total amount of the grants is $86,410.

MAJ Moore and MAJ Aldering's proposal, VMI Clean Energy & Air Resources (CLEAR) Research Education and Workforce Development Program, is an innovative, cross-disciplinary and collaborative research program that directly supports the Vision 2039 goal of bolstering Science, Technology, Engineering, and Mathematics (STEM) programs and the percentage STEM majors at the institute. The CLEAR Program enhances both graduate and undergraduate level education by providing real-world, hands-on research experiences involving the creation and development of alternative and sustainable fuels. The proposal was funded at $86,410 and will be augmented by a $40,000 grant from Dominion Resources.