



VIRGINIA MOUNTAIN SECTION NEWSLETTER

IEEE Region 3, Council 09, Section 65

May 2007

IEEE VMS May Meeting: Thursday, May 17, 2007

Tour of the MRI facility at the Teaching Hospital of the Virginia-Maryland Regional College of Veterinary Medicine (VMRCVM) at Virginia Tech

VMRCVM MRI Facility

The range of non-invasive procedures available in the Veterinary Teaching Hospital was expanded with the acquisition of a Magnetic Resonance Imaging (MRI) unit in late December 2006. Unlike conventional x-rays and computed tomography (CT) which use ionizing radiation to create diagnostic images, MRI uses a strong magnetic field and radio waves to create detailed images of internal structures. MRI is considered the most sensitive diagnostic imaging test for brain and spinal cord diseases since it can detect extremely subtle abnormalities. When placed in a MRI unit, the hydrogen atoms within tissues align with a strong magnetic field generated by the instrument. Radio waves pulsed into the field then stimulate the hydrogen atoms to release energy, which is transmitted to a computer for analysis. Since the signals of abnormal tissues are different from those received from normal tissues, they will show up as either very white or very dark areas in the computer image display. Brain masses and spinal cord compression are the most common diagnoses made by the MRI unit. These

conditions are most commonly treated through surgery or, in the case of tumors, radiation therapy. While currently used primarily for the diagnosis and treatment of injuries and diseases of the spinal cord and brain, **Dr. Jeryl Jones** (who will lead the tour) predicts the unit will also likely be used to diagnose canine knee joint problems in the future.

Dr. Jeryl Jones, is an Associate Professor in the Department of Small Animal Clinical Sciences specializing in Radiology. She is the Faculty coordinator for the Diagnostic Imaging Research Resource Laboratory, and is also an Affiliate faculty member in the School of Biomedical Engineering Sciences. Dr. Jones earned her Doctor of Philosophy - Biomedical Sciences from Auburn University, Doctor of Veterinary Medicine from the University of Georgia in Athens, and Bachelor of Science at Clemson University. She is board certified by the American College of Veterinary Radiology. Her research interests are

- Accuracy of computed tomography (CT) for representing tissue morphology and disease diagnosis,

- Outside factors that limit CT diagnostic performance, and
- Validation of new CT protocols to improve diagnostic performance and utility.

Dr. Jones' professional experience includes 7 years as a veterinarian at a small animal practice first in New York and then South Carolina. She came to Virginia Tech in 1995.

Schedule

5:30 PM Tour at VMRCVM

7:00 PM Social and 7:30 PM buffet dinner at the Holiday Inn on Prices Fork Rd. in Blacksburg

Dinner Cost:

Member or Guest \$20.00

Student: \$ 10.00

Advance reservations are required for both the tour and the dinner. Please reserve by

5 PM Monday May 14

Dr. Wilbur Dale (540) 464-7547

[mail to:dalewn@vmi.edu](mailto:dalewn@vmi.edu)

Please indicate the number of people attending the tour, the dinner, or hopefully both

Directions to VMRCVM

I-81 to Exit 118B
460 West approximately 8 miles to the entrance to Virginia Tech at Southgate Drive (Route 314). Right onto Southgate Drive and then first left onto Duckpond Drive. Take second left into driveway of VMRCVM. Follow driveway past first parking lot and courtyard, and park in client parking area. We will gather in the waiting room of the teaching hospital. Please arrive by 5:30 PM.

IEEE CONSULTANTS AFFINITY GROUP/VMS

The following is the current listing of consultants:

1. Tuttle International Tech. Marketing, Roanoke

(540)977 4007, Re Electromechanics, Robotics, and Intellectual Property Processes.

2. Squire Consulting,

www.jimsquire.com. Biomedical engineering, instrumentation, endovascular stenting, patent litigation.

3. David H. Geer, PE Geer & Associates, LLC

540-774-4905
d.geer@ieee.org
Mathematical models for industrial processes.
Software development and maintenance in C, C++, Ada, and Fortran.
Website design, development, and maintenance.

4. Ingrid Burbey, IT Works Software Development.

iburbey@vt.edu
Website: filebox.vt.edu/users/iburbey
Embedded, real-time systems, C, Assembly, Woman-owned Business Enterprise (certified in Virginia)

Anyone wishing to be added to this group, or desiring more information should contact Ed Tuttle, Affinity Group Chair, tuttleone@earthlink.net.

Speaker of the House Nancy Pelosi, Sen. Lamar Alexander Recognized for Leadership Promoting U.S. Innovation & Competitiveness

WASHINGTON (1 May 2007) -- Speaker of the House Nancy Pelosi (D-Calif.) and Sen. Lamar Alexander (R-Tenn.) will receive the 2007 George E. Brown Jr. Science, Engineering and Technology Leadership Award today for their prominent roles in ensuring that the United States meet the global competitiveness challenges of the 21st century. Through their enthusiastic support for science, engineering and technology research and education, the congressional leaders have helped Congress understand and act upon the connection between basic research and the U.S. innovation enterprise.

Pelosi was chosen for leading the House Democrats' Innovation Agenda, which she unveiled in November of 2005. The Innovation Agenda, which follows recommendations of the National Academy of Sciences' "Rising Above the Gathering Storm" report, proposes concrete measures for an educated and skilled U.S. workforce and revitalized research at U.S. universities and national laboratories. Since announcing the Innovation Agenda, Pelosi has championed its proposals, and science research was made one of the few priorities in the Fiscal Year 2007 joint-funding resolution.

Alexander is being recognized for requesting and tirelessly publicizing, with Sen. Jeff Bingaman (D-N.M.), "Rising Above the Gathering Storm," which has had an immense influence on bringing attention to the issues of U.S. competitiveness and innovation, and the leadership role government needs to play.

The award is presented annually by the Science, Engineering and Technology Work Group to members of Congress who are effective advocates of federal science and technology. It is named for

the late Rep. George E. Brown Jr., a longtime member of Congress who made outstanding contributions to federal support for science and technology over a long and distinguished career in Congress.

2007 VMS OFFICERS

Chairman: Jan Helge Bohn

[mail to:bohn@ieee.org](mailto:bohn@ieee.org) 231-3276

Vice Chairman: Wilbur Dale

[mail to:dalewn@vmi.edu](mailto:dalewn@vmi.edu) 464-7547

Sec./Treasurer: Chris Bonadeo

cbonadeo@verizon.net

VMS EXECUTIVE COMMITTEE

David Geer dgeer@ieee.org

F. Gail Gray fggray@vt.edu

Patrick Schaumont schaum@vt.edu

Edward Tuttle tuttleone@earthlink.net

Junior Past Chairman: Jim Squire

<mailto:squirejc@vmi.edu>

VMS Chapter Chairs

Computer, Control Systems, & Industrial Electronics:

Sandeep Shukla shukla@vt.edu

COMMITTEE CHAIRS

Student Activities: Dave Livingston

<mailto:d.livingston@ieee.org>

Virginia Council: Jan Helge Bohn

[mail to:bohn@ieee.org](mailto:bohn@ieee.org)

NEWSLETTER

Editor: Ira Jacobs

<mailto:ijacobs@vt.edu> 231-5620

Contact Newsletter Editor to be added to the VMS listserv

WEBSITE

<http://www.ewh.ieee.org/r3/virginia-mountain>

Webmaster: Chris Bonadeo

cbonadeo@verizon.net

April 16, 2007



The Virginia Mountain Section shares in the grief of our colleagues and friends at Virginia Tech. A very beautiful memorial, consisting of a framed photograph and letter, was presented by the VMI IEEE Student Branch to the Virginia Tech Branch on April 27

Virginia Mourning Her Dead

The Virginia Military Institute and the Department of Electrical and Computer Engineering wish to express their heartfelt sorrow and deepest condolences for the tragedy on April 16th 2007. Please accept this photograph as a gesture of support from our school to yours.

In the background stands Nichols Engineering Hall. It is a reminder of the hopes and dreams of the fallen, and of the connection we share as fellow researchers, students, and teachers --- engineers.



In the center is *Virginia Mourning Her Dead*, sculpted by Sir Moses Ezekiel in 1903, as a tribute to the cadets who died in the Battle of New Market, 1864. Lady Virginia now mourns the loss of her students from both campuses, and the entire nation joins in her grief.

In the foreground, a cherry tree blossoms in the spring sun. It is a promise of the peace, joy, and healing that every year brings. Please know that our thoughts and prayers are with you.

Signed:

Dr. S. Addington, Department Head
Cadet J. Ostermann, Chair VMI-IEEE
Cadet G. Flathers, Vice Chair, VMI-IEEE

*From left to right: Dr. James Thorp, VT ECE
Department Head, Brian Cosby VT IEEE
Student Branch Chair, Dr. Sean Addington,
Cadets Jon Ostermann and G. Will Flathers.*

