The growing number of online students in our School and the complexity of programming projects dictate the necessity of designing/deploying a complex computing infrastructure which must satisfy contradictory requirements. From one stand point, such an infrastructure is expected to grant administrative privilege to students, working on a variety of programming projects, for instance, web programming for cloud computing. From another perspective, granting administrative privilege will not only allow students to access all files on the system (including other students’ work) without legal permission, but also may result in a system crash. The simplest workaround in this case would be to setup dedicated workstations to individual students but this solution doesn't seem to be scalable, reusable, and convenient to run distance learning process. The School of Computing and Mathematics has recently started developing such a computing infrastructure to address mentioned requirements along with a set of useful features: scalability, improved security measures, convenient administration, and reduced cost. The infrastructure is designed to be hybrid, for instance it has a mixture of physical (hardware) and virtualized (software) components. More specifically, the virtualized part exploits hypervisor technology in two most commonly used implementations: Citrix XenServer and VMware vSphere ESXi server.

(continued on pg. 2)
## New Computer Infrastructure

Both implementations allow hosting *multiple virtual machines* on a *bare-metal* platform (hardware server running hypervisor software). Virtual and physical machines are interconnected into a *hybrid network* supported by several *physical* and *virtual* network *switches*. The last crucial component of the system is a set of *thin terminals* which are *inexpensive, diskless* endpoints of the user interface provided by virtual machines. Such an interface, (a.k.a. *virtual desktop*) is delivered to end-users by means of either of the following approaches: Microsoft Windows Terminal Service (RDP protocol) or Linux Terminal Server Project. The proposed design of the infrastructure was accepted for presentation on the 8th *International Conference on the Frontiers in Education: Computer Science and Computer Engineering* (FECS’12) to be held on July 16-19, 2012, in Las Vegas, USA.

*Dr. Simon Baev*

## 2012 Mathematics Tournament

High school students from all over Georgia squared off Friday, January 20, 2012 at Georgia Southwestern State University (GSW) to put their math skills to the test. The School of Computing & Mathematics at GSW held it’s 37th annual mathematics tournament. Sponsored by AT&T Foundation, the competition is a qualifier for the state math tournament.

Teams from 33 high schools competed in the written and ciphering problem-solving portions. In all, 310 students competed in the event. Winners were recognized in four Georgia High School Association (GHSA) division and two Georgia Independent School Association (GISA) divisions. First place in the team competition was awarded to Landmark Christian School (GHSA-A), Pike County High School (GHSA-AA), Columbus High School (GHSA-AAA), Rockdale Magnet School (GHSA-AAAA), Brandon Hall School (GISA-AA) and Tatnall Square Academy (GISA-AAA). Locally, Marion County High School (GHSA-A) won second place and Americus-Sumter High School (Division AAAA) won third place.

## UPSILON PI EPSILON

Upsilon Pi Epsilon is an honor society whose membership consists of outstanding undergraduate and graduate students in Computing Science.

To be eligible for membership, undergraduate students must be at least a Junior or Senior with a minimum GPA of 3.0, or a graduate student with at least 18 hours and a minimum GPA of 3.5.

*To find out more information about UPE, or to join as an alumni member, please contact Karen Cook at (229) 931-2818 or kcook@canes.gsw.edu*
In an effort to better understand how our programs prepare our graduates for entering the work force, we are asking that all of our alumni fill out an Alumni Survey. This information will allow us to assess our programs and make changes if needed to our current standards, policies, and procedures. We would greatly appreciate your input and comments.

Please use the appropriate link below to fill out a survey:
Bachelor of Science degrees: [http://gsw.edu/Assets/SchoolofComputingandMath/files/Alumni_undergraduate.pdf](http://gsw.edu/Assets/SchoolofComputingandMath/files/Alumni_undergraduate.pdf)
Master of Science degrees: [http://gsw.edu/Assets/SchoolofComputingandMath/files/Alumni_graduate.pdf](http://gsw.edu/Assets/SchoolofComputingandMath/files/Alumni_graduate.pdf)

“My State, My Country” Presentation

On Wednesday, March 14, 2012, Dominic Davis and Obioha Ohayagha gave a presentation about their home counties of the Nigeria and the Grenadines. This was a very interesting presentation. Some topics discussed were art, language, culture, traditions, and religion.

Successful Alumnus - John Wright

**John T. Wright** graduated with honors in 2009 with a Bachelor of Science degree in Computer Science from Georgia Southwestern State University. One year prior to graduating he received full-time employment with a major financial services processing company in Georgia. He is currently a System Software Analyst, which is an upper level Unix/Linux engineering position.

Since John’s employment, he has been able to use the skills he learned from GSW to further his career within the company. “I use the concepts and tools learned from school every day in my activities at work. These days companies are doing everything in their power to do more with less, which puts a lot more pressure on students graduating, to show that they are worth the investment which comes with full time employment. Working as a UNIX/Linux Administrator is a very challenging and demanding job, but it has its perks due to the fact that it is a very specialized field and thus in great demand across the country. Graduation can be scary for any student, but you have to get out there and compete for the job you want and never settle. You will always find the job you want if you have the drive and motivation to push for it.”