CSSIA CONNECTS
SPRING/SUMMER 2013
NATIONAL RESOURCE CENTER FOR SYSTEMS SECURITY AND INFORMATION ASSURANCE

Reaching Underrepresented Population Top CSSIA Initiative

The Center for Systems Security and Information Assurance (CSSIA) is developing a comprehensive strategy to reach out to underrepresented populations in an effort to increase their numbers in the cybersecurity workforce. Early strategies include plans to:

- Develop a toolkit to disseminate best practices, research, and other useful information for recruiting, retaining, and advancing minorities, women, and persons with disabilities into the cybersecurity workforce. The toolkit should enable identification of problems and challenges and develop strategies for addressing the low numbers of African-American, Latino, women, and disabled IT security professionals. Included will be suggestions about how institutions can support students from underrepresented populations, as well as relevant research carried out at local, regional, national, and international levels. Although much of the information will pertain to science, technology, engineering, and mathematics in general, the resources will be equally applicable to increasing and supporting a diverse cybersecurity workforce as well.

- Assemble an advisory committee of individuals with expertise in recruiting and retaining women and minorities in STEM and/or cybersecurity education from across a variety of sectors, including business and industry, education, and nonprofit. The advisory committee will help CSSIA identify and describe best practices in higher education and other industries for recruiting, retaining, and advancing minorities, women, and persons with disabilities into the cybersecurity workforce, especially creative or innovative practices with noteworthy results. The advisory committee also will help CSSIA disseminate resources and identify faculty development opportunities.

- Host a Collegiate Cyber Defense competition in conjunction with the 2014 Association of Computer/Information Sciences and Engineering Departments at Minority Institutions (ADMI) Symposium. ADMI, a national organization dedicated to exploring and providing remedies to the educational issues in computer/information science and computer engineering that confront minority institutions of higher education, each year hosts a symposium devoted to computing issues relevant to minority students, education, and institutions. Holding a Collegiate Cyber Defense competition in conjunction with the 2014 ADMI Symposium will allow students to form teams that build and defend mock production business infrastructures from professional "hackers" who attempt to take production systems offline and breach their security, as judges deploy network enhancements and upgrade challenges.

For more information, contact Edward Leach, director, of Outreach Services, at ***leache@aol.com.***

CSSIA
National Center for Systems Security and Information Assurance

Moraine Valley Community College
Changing Lives for a Changing World

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CSSIA CYBER WARS

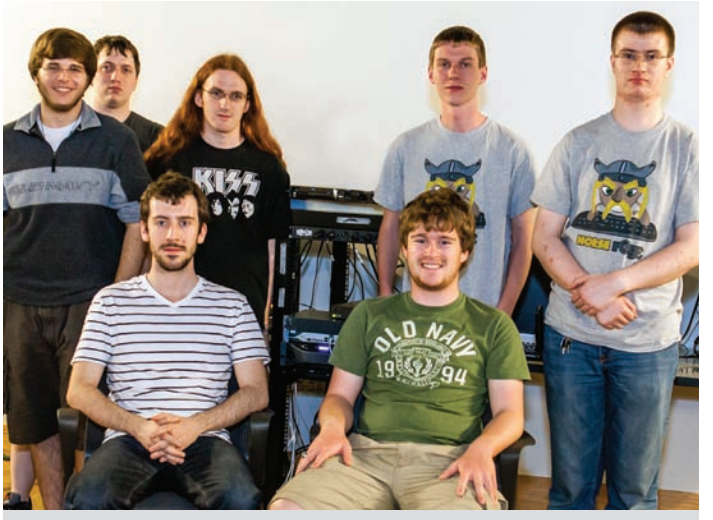
Cyber Wars is a new CSSIA competition for collegiate teams in an open environment enabling participants to exercise a plethora of information technology skills utilizing the Cyber Competition Stadium. CSSIA Cyber Wars is a new and different type of competition, one that is more challenging and engaging for students. Student teams acquire a network with services and confidential data that must be protected. At the same time, student networks have penetration and attack capabilities that may be directed to other teams. What is different about CSSIA Cyber Wars is that each team is able to directly compete with every other team. In so doing, teams may be able to capture confidential data from opposing teams as well as interrupt the services of their opponents.

Feedback will be available to students during the event as to how all teams are performing. "It's a rock'em sock'em, no-holds-barred struggle for dominion," said David Durkee, director of CSSIA Cyber Wars.

One application per team and only one team can compete from each campus. As an invitational, teams will be expected to compete without outside help or assistance.

CYBER WARS DATES
July 13
Aug. 10
Sept. 14
Oct. 12
Nov. 9
Dec.14

REGISTER AT
https://www.surveymonkey.com/s/TWPZXZC.



NORTHERN KENTUCKY TAKES FIRST PLACE IN CYBER WARS
Northern Kentucky University cybersecurity students took top honors at the first CSSIA Cyber Wars competition. Winners include (from left) Connor Gerome, Daniel Kirschner, Sean Benson, Lee Epling, Jack Lannon, Brandon Hinkel, and Brandon Warner. Not pictured is Josh Bemerer.

May's Cyber Wars Winners

The launch of the first CSSIA Cyber Wars was an extreme success with Northern Kentucky University taking 1st place. This hardworking team also took 3rd place at CSSIA's Midwest Regional Cyber Defense spring competition.

"Cyber wars competition was a fantastic experience. Our team is glad to have won 1st place. We have been participating in Collegiate Cyber Defense Competition for five years and several Capture-The-Flag (CTF) competitions in the past. Students felt Cyber wars competition was a great exercise; it's very similar to real-world cyber wars than most other CTF competitions we experienced. Many other CTF competitions concentrate more on security puzzles, reverse engineering, or finding vulnerabilities in software, but do not give a feeling of real-world IT security operations. Cyber wars gave us the right feeling of securing IT infrastructure and fighting back bad guys," said Yi Hu, NKU's team advisor.

NATIONAL CYBER LEAGUE

The National Cyber League (NCL) is a cyber exercise landscape that allows both the individual and student teams to practice cybersecurity in a safe, yet challenging environment. Student teams are able to practice and compete in NCL's year-round cyber exercises in addition to the one-off "playoff" systems. This format is committed to creating the most educational, challenging, and entertaining cyber competitions possible. For more information, visit ***nationalcyberleague.org***.

Moraine Valley Earns High Designation for Cybersecurity Programs

Moraine Valley is now one of a handful of community colleges in the nation to have mapped its cybersecurity program to three curriculum standards established by the National Information Assurance Education and Training Program (NIETP).

Similar to accreditation, colleges offering cybersecurity programs have designations that indicate that an institution's cybersecurity classes meet national knowledge and skill standards established by experts in the field. Moraine Valley applied for the NIETP designation and was recognized by the Committee on National Security Systems (CNSS) for meeting 4011, 4012 and 4013 designation status for the next three years. Few community colleges have succeeded in mapping three courses to the NIETP national standard. The three program areas are network security, operational security and risk management/assessment.

In 2010, the college became a CAE/2Y, which is a National Centers of Academic Excellence in Information Assurance 2-Year Education. "Our designation is due in part to the great work by our faculty and staff who continuously update and improve our cybersecurity curriculum and class content," said Dr. John Sands, professor of Information Technology and co-principal investigator of the CSSIA NSF Regional Center. "Over the last decade, the federal government has invested in national resources designed to help protect our nation's information infrastructure. This includes comprehensive vulnerability databases, early warning systems, various tools, and training. The federal government has spent a lot of money on developing resources to assist organizations and people working with and responsible for handling sensitive information. We teach our students and members of our business community how to use these resources. Ultimately this designation impacts students and keeps them in high demand in the workforce."

UIS Graduate Wins Microsoft Hackathon

Paul Brown, a computer programmer and chief architect for Systems Development Group Inc., has long wanted to enter a Microsoft's Hackathon competition. The three-day competition was intended for contestants to come up with a new software solution. After Paul and his team pitched their idea to some of the nation's top software gurus, came QBranch, a smart-phone award-winning app. Brown said was a self-taught programmer prior to obtaining a bachelor's degree in computer sciences at Sangamon State University (now the University of Illinois Springfield).

Security Awareness Symposium

Internet security awareness for families and the community is a top priority of the Cyber Security Symposium. Geared toward parents, teachers and children, CSSIA is collaborating with Northwestern University to host this event Friday, Sept. 6, from 6-9 p.m. at St. Mary Antiochian Orthodox Church, 6330 W. 127th St., Palos Heights, Ill.

The symposium will address:

- common concerns parents have about their children's safety online
- what social media can do to children's emotions, friendships and relationships

For more information, visit cssia.org or contact Lynn Dohm at ***lynn.dohm@morainevalley.edu*** or **(815) 717-6546**.

Congratulations to U of I for being #1 on Top Ten List

University of Illinois Computer Science Department ranked number 1 on the top 10 Best Online Schools for Computer Science and IT. The key component in the *Best Computer Science Degrees* decision-making process was a good quality curriculum while offering the students the option of studying at a time which is convenient for them. The U of I's Computer Science Department also has been named as a National Center of Academic Excellence in Information Assurance Education. Ted Mims, chair of Computer Science Department, first got connected with CSSIA in 2004. From then on he's been involved in offering graduate credit for teachers taking Cisco and Security Training offered by Moraine Valley and CSSIA. He is one of the original co-PIs on the grant and has remained involved.

MWCCDC: Preparing Top Students for Careers in Cyberdefense

Rose Hulman emerged victorious in this spring's Midwest Regional Collegiate CyberDefense Competition, a contest that drew more than 300 students.

Winning students from left to right: Neil Semmel (SO), Robert Fendricks (JR), Matt Fuson (SR), Parker Schmitt (SR), Ryne Bell (JR), Sean Richardson (SR) (team captain), Mark Wlodarski (SR), Cameron Spry (SO).

3RD PLACE NATIONAL CCDC WINNER HAILS FROM MIDWEST REGIONAL COMPETITION

The Rose-Hulman Institute of Technology (RHIT) CCDC team began in the fall of 2011 when Sean Richardson (the current team captain) transferred to RHIT. He expressed an interest in starting a CCDC team, and Dr. Nadine Shillingford Wondem agreed to be the team advisor. A group of students began regular practices to prepare for the 2012 CCDC. There were approximately eight regular participants including three software engineering majors, two computer science majors, two computer engineering majors, and one physics major (two freshmen, two sophomores, two juniors, and two seniors). They competed in the 2012 Indiana State CCDC and won first place. This was an impressive accomplishment considering the age of the team and that they competed with six players rather than the required eight. The team competed in the Midwest Regionals and, although they tried their best, they were not successful in gaining a trophy. This only increased the team's passion for success, and they continued training for the 2013 competitions.

RHIT does not have a computer security program. In fact, there is only one elective course in computer security. Most of the training and expertise that the team has gained over the last year-and-a-half has been fueled by their motivation and love of the field. The CSSE department added a one-credit CCDC course in the fall of 2012 to expose more students to cyberdefense.

Students can register for this course to learn more about the CCDC and to gain expertise regardless of whether or not they join the team. Besides the regular scheduled time during the week required by the course, the team practices every Saturday afternoon for a few hours. The training at the regular scheduled time as well as the Saturday practices are usually led by a team member. The members exhibit team spirit and enjoy working with each other. In fact, the success of the team relies on the fact that there is a mutual respect among team members and a genuine passion for the field of cyberdefense. The team also has the support of the CSSE department and the general RHIT community.

"Talent wins games, but teamwork and intelligence win championships." ***—Michael Jordan***

To combat the expanding threat of cyberterrorism and cybercrime, the United States' education system is ramping up efforts to prepare top students for careers in cyberdefense. In particular, the nation's community colleges are offering technology-based programs designed to prepare current students for careers in cybersecurity.

CSSIA has been training students to become the next generation of cybersecurity specialists by preparing them for careers in cybersecurity through real-world practice and competitions. "We invest many hours in developing competitions that are designed to test cybersecurity skills in real world scenarios. These competitions enable students from other institutions to compete against each other by detecting, deterring and protecting their network from highly-skilled penetration testers (a.k.a. hackers) hired to attack their computers," said Erich Spengler, director and principal investigator of CSSIA.

Don't hesitate!
Get your team together now and register for 2014:
Visit *cssia.org/ccdc*

Watch the MWCCDC 2013 video on CSSIA's YouTube channel—**CSSIAdotORG**

Student Spotlight

Kelly Blizzard

Moraine Valley Class of 2013
A.A.S., IT Security Specialist

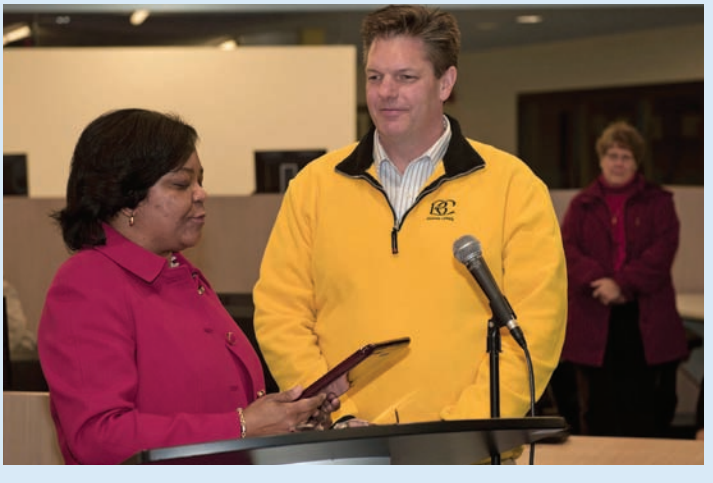
"I went to Moraine Valley right after high school (1985) and completed 45 hours of general education requirements before transferring to the University of Illinois at Urbana-Champaign, where I graduated with a B.A. in urban planning. I immediately started working in commercial property management and, after nine years, moved to Lehman Brothers to begin working in municipal finance. I spent 13 years in that industry, but never really felt challenged or fulfilled. I often contemplated changing careers, and as I was approaching my 45th birthday, my discontent with my career was stronger than ever. I knew that if I was going to make a change, I had to do it soon, and I had to give it 110 percent.

"I quit my job and spent the next few months researching careers and programs. I knew I wanted my new career to be in a profession with good job prospects, one that would provide financial stability, and that would challenge me intellectually. It became clear that I should pursue a career in Information Technology. This was not really a surprise to me. Not only did it fit my criteria, but also I had taken various personal interest surveys over the years, and careers involving computers were always at the top of the results list. Technology has always fascinated me. I had never considered a career in technology, but all signs were pointing me in that direction.

"Now that I knew *what* I wanted to pursue, I had to decide *where* I would pursue it. Choosing Moraine Valley as my pathway to enter the IT field was an easy decision for me. I had had a positive experience there and I knew the value of the education I would receive there. I enrolled in LAN-101 immediately. John Sands, co-PI of CSSIA, taught my LAN-122 class in spring 2012. I enjoyed his class and my interest in entering the IT field was strengthened even more after taking his class. I never looked back! In addition to graduating, I have also already passed the Network+ certification exam. The instructors and students were both supportive and welcoming, and this meant so much as a returning adult student. I know I made the right decision and am excited about starting my new career in IT Security."

CSSIA Celebrates 10th Anniversary and Erich Spengler's Service

Erich Spengler, principal investigator of CSSIA, was acknowledged at Moraine Valley's ribbon-cutting ceremony for the newly renovated Center for Contemporary Technology. College President Dr. Sylvia Jenkins honored Erich with a plaque for his years of service and successful accomplishments with CSSIA.



Ginny Swyndroski (left) and John Sands (center) at an event honoring Erich Spengler (right) for 10 years of CSSIA excellence.

Moraine Valley CSSIA Student Alumni Land Jobs

They all studied at Moraine Valley Community College where they earned a variety of certificates. Some earned associate's degrees and nearly all competed in cybersecurity competitions. Now, seven former Moraine Valley students from the college's Center for Systems Security and Information Assurance (CSSIA) program work at DELL SecureWorks, a worldwide IT security services company.

John Hanson, Paul Jankowski, Kyle Leubscher, Nan Li, Carlos Marquez, Joe Mayer, and **Ursula Radwanski** either were or still are students at Moraine Valley. Collectively they've earned a variety of certifications and degrees including N+, CCNA and A+ certification. They all work in various departments at DELL from the firewall team to network engineering.

Although each person had his or her own path to a career at DELL, they cited the benefit of quality teachers, classes and competition to get them there. Marquez received an Associate in Applied Science—Internet Specialist, along with several certifications, after studying at Moraine Valley. After graduation, he was hired at DELL in large part due to his participation in a CSSIA cyber defense competition. "The key was the competition, the exposure to people, teachers, employers, and schools such as DePaul and Illinois State universities. DELL was a big player in the competition," he said. Mayer competed in 2008, helped with a competition in 2009 and from those experiences was hired by DELL in 2010.

For Radwanski, the key was connections and an internship. She received an Associate in Science before being hired at DELL. In between, she had help from Lou Balek, Moraine Valley information security specialist, in securing an internship with the Chicago Fire as an assistant IT manager. That experience in addition to earning a bachelor's degree from Saint Xavier University aided her journey to DELL. And how does Radwanski feel in a field typically dominated by men? "Our company has never made me feel out of place; I'm not treated differently. There are not that many women in my area, but there are many throughout the company," she said.

Mayer earned an associate's degree along with several certifications. He had an internship at CSSIA, worked at some CSSIA competitions and said DELL hired him from a competition. Hanson has several certifications from Moraine Valley and continues to take classes while working at DELL. He participated in the competitions as a student and judge. "You really see how Moraine Valley stacks up to bigger schools like DePaul University." he said.

Li worked at the CSSIA competitions which, along with earning a bachelor's degree, helped him secure his job. He is currently working on a master's degree. Jankowski finished his studies at Moraine Valley before being hired the following year.

Each person mentioned the value of Moraine Valley teachers, highlighting Ricky Moore, associate professor of information technology; Erich Spengler, professor of computer integrated technologies and director and principal investigator of CSSIA; and Dr. John Sands, professor of information technology and co-principal investigator of CSSIA. In their classes students didn't just read about situations, they were thrown into them. "John and Erich show you these things in the book and then say 'now here's real life.' They go above and beyond the book," Marquez said. Radwanski added, "Ricky's LAN 101 class was the most inspiring moment. If not for him, I wouldn't be here. He's so passionate and makes you feel you can do anything. He shows where you can go. It's crazy inspiring."

Studying at Moraine Valley before pursuing a bachelor's degree made them feel ahead of the curve. "Schools like Moraine Valley are like a pot of gold you don't know about, but it's great. It's the best bang for your buck," Marquez said. "All around, the curriculum is solid. The firewall classes I took and taught are almost the same scenarios as in reality." Li even went so far as to say he could take naps in classes at the four-year university he transferred to because he was so ahead of the class thanks to his Moraine Valley studies. The common pattern in this field is earning a two-year degree along with certificates, getting experience in the work world and then getting paid by an employer to go back to school for a bachelor's degree. Fortunately for them and future employees, DELL offers tuition reimbursement for continued education. Moraine Valley pushes for certifications, unlike most four-year universities, Radwanski said. The group agreed that you don't need a degree to get these kind of technology-based jobs, but more degrees help these days. A degree is insurance.

SAVE THE DATE!
Friday, March 14, 2014
Cyber Defense and Disaster Recovery Conference 2014
Topic: Issues Surrounding Distributing Storage

The Cyber Defense and Disaster Recovery Conference held at University of Illinois Springfield had the highest attendance in its 10-year history. Registrants traveled from California, New Jersey, Texas, and South Carolina to become educated on mobile security.

Presentations were given by Mike Bazzell, FBI Special Investigator, David Schwartzberg from Sophos, and Dave Chronister from Perimeter Security. The keynote speaker, Dr. Newton Howard, director of the Synthetic Intelligence Lab and resident scientist at the Massachusetts Institute of Technology, propelled the audience into a future in which the physical and digital world will blend into a single reality.

Next year's conference will deal with issues surrounding distributed storage and will be held on the UIS campus Friday, March 14, 2014. The conference will consider flash storage and the cloud—and what you can do to protect yourself from the inevitable risk of this continuously evolving media.

U.S. Cyber Challenge Camp IL @ Moraine Valley

Illinois Gov. Pat Quinn recently announced the addition of Illinois to the U.S. Cyber Challenge's (USCC) series of summer Cyber Camps. This competition is a collaborative effort with USCC and CSSIA, and will take place at Moraine Valley Community College the week of Aug. 12. The competition will provide a free pathway for students, veterans and other jobseekers to develop their skills and talent to fill mission critical jobs in cybersecurity. This effort also will address key national security issues by offering participants opportunities for testing, training and learning, at no cost, which will prepare them for important jobs in the cybersecurity workforce.

Attendance to all USCC's summer Cyber Camps are by invitation only. Participants are invited to attend if they meet sufficient expectations on the qualifying Cyber Quests online competition that took place this spring. "We have a significant deficit of well-qualified cybersecurity professionals in our workforce," said USCC National Director Karen Evans. "Since their inception, our Cyber Camps have proven to be an effective avenue by which skilled talent can develop their abilities even further by our extraordinary team of instructors and be recruited by public and private organizations that attend the job fair," she said.

USCC is on a mission to significantly reduce the shortage in the cyber workforce by serving as the premier program to identify, attract, recruit and place the next generation of cybersecurity professionals. USCC's goal is to find 10,000 of America's best and brightest to fill the ranks of cybersecurity professionals where their skills can be of the greatest value to the nation. ***USCyberChallenge.org***

CSSIA's Summer Train-the-Trainer Schedule:

July 8-12
VMware
Oklahoma Career Tech

July 8-12
Forensics
Working Connections, TX
connectedtech.org

July 29-August 2
Security+
Distance-learning

Aug. 5-9
Security+
BATEC National Summer Institute
batec.org

Aug. 5-9
Information Storage Management
Distance-learning

Aug. 12-16
VMware
Distance-learning

Coming soon:
Open Stack Cloud Computing
Linux Essentials
Cloud Infrastructure and Services (CIS)

Register for existing faculty development training. ***cssia.org/cssia-training.cfm***

Would your institution like to schedule faculty development training? Contact Lynn Dohm, communications coordinator/faculty development, at ***lynn.dohm@morainevalley.edu*** or **(815) 717-6546**. It's as simple as that!

Stay Connected!

Make it easy to stay connected to CSSIA. Sign up for our e-newsletters. We will keep you updated on the latest and greatest of CSSIA including trainings, conferences and competitions. For more information, contact Lynn Dohm, communications coordinator/faculty development, at *lynn.dohm@morainevalley.edu* or **(815) 717-6546**.

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National Resource Center for Systems Security and Information Assurance (CSSIA)

Learn more about CSSIA!

cssia.org

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