Careers in Cyber Security Workshop For Guidance Counselors & STEM Coordinators

> Tuesday, September 27, 2011 9:00 am – 3:00 pm

JHU Columbia Center- Gateway Park 6740 Alexander Bell Drive Columbia, Maryland

(ISC)



JOHNS HOPKINS



**CyberWate** 





Organized by: Educational Technology Policy, Research, and Outreach www.edtechpolicy.org



The Goals of the School Counselors Workshop are to:

- Increase counselor awareness of the workforce needs of the United States in IS/IA and related fields (digital forensics, homeland security, network security, systems administrator, cybersecurity).
- Inform counselors & STEM coordinators about career pathways including 2 and 4 year degree and/or certification tracks.
- Describe security clearance levels, and the process for obtaining them.
- Increase counselor awareness about the CyberWatch Center and its benefits to students and the future technology workforce.
- Share the connection between the CyberWatch program and post-secondary success at partnering colleges and universities.

Educators are critical in the career choices of students. This 1 day workshop will introduce counselors to IS/IA, Cybersecurity and Digital Forensics career opportunities, and choices within these categories, as well as, the multiple pathways to enter the workforce in these areas. Industry employers will speak to participants about career opportunities, student internships, externships and other related opportunities.

Educators will learn about current and future career trends in IS/IA, Cybersecurity and Digital Forensics and will receive updates and current promotional materials for distribution to interested students and parents, and discover how to use the CyberWatch Center Web site to find answers to questions from parents, students, and other educators.

Special for All Workshop Attendees Come to the October 6-7, 2011 C3 Conference FREE <u>http://www.edtechpolicy.org/C32011/</u> Discount code "cyberwatch"



Educational Technology Policy, Research and Outreach CyberWatch K12 Division http://www.edtechpolicy.org/cyberk12



Dear Participants:

Educational Technology Policy, Research and Outreach (ETPRO) and CyberWatch K12 Division take great pleasure in hosting its annual Careers in Cyber Security Workshop. The core mission of the IA/Cybersecurity/Digital Forensics workshop series is to increase educator awareness of the workforce needs of the United States in Cybersecurity and related fields (digital forensics, homeland security, network security, systems administrator, cybersecurity), inform counselors about career pathways including 2 and 4 year degree and/or certification tracks and describe security clearance levels, and the process for obtaining them. This workshop will begin with an opening snapshot of the growing demand of workers in information security, and then move on to situate the growing need within our Maryland community. Peggy Maxson, Director for the National Cybersecurity Education Strategy at the Department for Homeland Security, will then share the newly released National Cybersecurity Framework which will help attendees better understand the agreed upon functional titles, roles and pathways. Panelists will then share insight from the perspectives of large and small agencies and institutions and through the lens of students entering career paths themselves. Information will be provided from large and small business entities about current and future job opportunities, and a representative from the (ISC)<sup>2</sup> will help us decipher the various mazes of certification programs and career options. Nicole Smith, Senior Economist from the Georgetown University Center on Education and Workforce, will share the findings from the newly released College Payoff Report. We will end by sharing a list of possible cyber challenges and other resources to share with your school staff and students.

This workshop opportunity stems from the need to have educators and career counselors learn more about the growing need for cybersecurity careers particularly in this geographic location. Indeed, the U.S. Bureau of Labor Statistics projects a 48 percent increase in jobs for computer software engineers and a 55 percent growth in jobs for network system and data communications analysts by 2014. Projections for Maryland mimic the same trend. While computer operators and computer programmers are projected to decrease, computer software engineers, network systems and data communications analysts, and network and computer systems administrators are projected to go up between 40 and 50%, and computer and information systems managers are projected to grow by 23%. Much of this is fueled by the growing IT industry, which is in particular demand in MD, DC, and VA, because of the large federal infrastructure including intelligence and Department of Defense government agencies and related contractors, and will be increased by upcoming BRAC movements to Ft. Meade and the Aberdeen Proving Ground.

At the closure of the workshop, we hope that each participant has left with new knowledge and insights into the opportunities for their students and the vast resources that will help students and parents understand these exciting career opportunities. We also hope participants will continue to take part in and share with parents and students other exciting events scheduled throughout the year, including: The Annual C3 (Cyberethics, Cybersafety and Cybersecurity) Conference, the *Cool Careers in Cybersecurity* program targeting Middle School girls, the *CybeSTEM Summer Program* for high school students, the After-School *Mindtools* and *CyberSTEM Enrichment Programs*, the CyberSTEM foundational content, the new *SECURE IT* (Strategies to Encourage Careers in Cybersecurity and Information Technology) Program, and the new *CTE Cybersecurity Track*.

Sincerely,

Daring Prutt - mentle

Davina Pruitt-Mentle, Ph.D.Director Educational Technology Policy, Research and Outreach Outreach - STEM Initiatives Division CyberWatch K12 Division PI Septem

September 2011

## Careers in Cyber Security Workshop Agenda

8:45 AM	Check in
9:00 – 9:15	Welcome ETPRO/CyberWatch, Davina Pruitt-Mentle and MSDE, Michael Linkins
9:15 - 10:00	Cyber Security Need: A National Growth Career: ETPRO/CyberWatch, Davina Pruitt-Mentle, Ph.D.
10:00 -10:45	The National Cybersecurity Framework Understanding Cybersecurity Functional Titles, Roles and Responsibilities Peggy Maxson Director, National Cybersecurity Education Strategy Department of Homeland Security
10:45 -11:00	BREAK
11:00- NOON	Panel Discussion & Open Forum Educational Options Dr. Blair Taylor, Department of Computer and Information Sciences, Towson University Kelly Koermer, Dean of the School of Business, Computing & Technical Studies, AACC Rick Doten, Chief Scientist, Center for Cyber Security Innovation, Lockheed Martin John Baker, Carey Business School, The Johns Hopkins Carey Business School
12:00-12:45 PM	Lunch and Networking Visit 2 and 4 year institutions and industry booths
12:45 - 1:30 PM	Panel Discussion & Open Forum Student Viewpoint Brandon Dixon (2+2+2 Pathways model) Rose Kirby (Women in Cybersecurity) Brian Zhang (Freshman HCC)
1:30- 2:15 PM	The College Payoff Nicole Smith, Senior economist The Georgetown University Center on Education and the Workforce
	This report examines the most recent report regarding lifetime earnings for all education levels and earnings by occupation, age, race/ethnicity and gender.
2:15- 2:50 PM	Decoding the Cyber Security Profession Marc Noble, CISSP-ISSAP/Director, Government Affairs (ISC) <sup>2</sup>
2:50- 3:00 PM	Decoding the Cyber Defense and other Cool Competitions Cyber Patriot, Cyber Foundations, High School Networking Security Competition, BPA and FBLA CyberWatch Center Resources/Closure
	Briefing for Stipend Participants Davina Pruitt-Mentle, CyberWatch

**Educational Technology Policy, Research and Outreach**, a research and development organization located in Maryland, connects educational technology policy and research to instructional practice. ETPRO brings more than three decades of experience in the educational community, and years of experience in evaluating both formal and informal educational programs at the K-16 level, and conducting educational technology policy analysis. ETPRO's expertise is founded on a combination of classroom practice across K-16 tied with a solid research base.

ETPRO originated from the Educational Technology Outreach division of the College of Education, at the University of Maryland, and in 2007 was founded as an entrepreneurial entity committed to quality education for all learners, targeting the effective use of cutting edge technology in formal and informal educational settings to increase interest in Science, Technology, Engineering and Mathematics (STEM) fields. The fundamental gap between technology use and understanding of proper practices, lead ETPRO to the forefront of research, program evaluation and development of Cyberethics, Cybersafety, and Cybersecurity (C3<sup>TM</sup>) initiatives.





**The CyberWatch K12 Division** extends the CyberWatch mission to the K12 Community. Its goal is to improve the quality and quantity of the information assurance workforce. The K-12 Division Goals include increasing:

- the IA workforce pipeline
- community awareness of IA workforce needs
- community awareness of Cyberethics, safety and security, and
- security of K-12 IT systems

CyberWatch (CW) is a National Science Foundation funded Advanced Technology Education Center. The CW goals are focused on IA education at all levels, from elementary through graduate school and include curriculum development, faculty professional development, student development, career pathways, and public awareness. Since its founding as a consortium of 10 institutions in the Washington, DC metropolitan area, CW has grown to over 70 member institutions across multiple states.



### BIOGRAPHICAL SKETCHES In ALPHABETICAL ORDER

Careers in Cyber Security Workshop September 27, 2011

Educational Technology Policy, Research and Outreach CyberWatch K12 Division



John Baker, Sr. has spent the first 20 years of his career in the information technology industry, designing and developing information systems, and managing technology operations for a diverse set of organizations. These have included the World Bank, Lockheed Martin, Coopers and Lybrand, and Commercial Credit Corporation. In the last 22 years Mr. Baker has directed both the Graduate and Undergraduate Technology programs, and non-credit training offerings for the Carey Business School at John Hopkins University. Currently serving as Director for the program, he is responsible

for designing, implementing and managing the School's Undergraduate Business and Technology degree programs. He has 26 years teaching experience at the university level.



**Brandon Dixon** is a security research and engineer for GWU where he spends his time identifying malicious attacks and thinking of better ways to detect/stop them. His research done through on various security topics has gotten him attention with companies such as Adobe, Verizon, Sprint, and Cisco. He has discovered several exploits and flaws based on vulnerabilities found in commercial products, web applications and messaging technologies.



**Rick Doten** has over 21 years of experience in the IT industry, the last 15 of which focus specifically on cyber security, including building security programs and performing security assessments for almost all commercial industries and the federal agencies.

In his current role as a Chief Scientist in the Lockheed Martin's Center for Cyber Security Innovation (CCSI), Rick works with Lockheed business units to provide guidance to build and maintain trusted systems for our customers.

Current trends Rick spends a lot of time working on are Advanced Persistent Threat (APT) defense, Smart Grid Security, Application Security, and Insider Threat. Rick also conducts many internal security training sessions for both Lockheed Martin cyber security staff and corporate executive staff. Rick has keynoted and paneled many national and international cyber security conferences, has been quoted in numerous published security articles, and has appeared on both CNN and TechTV. Rick has developed and executed a number of full day physical and cyber disaster exercises for different parts of the country. Also, Rick holds a patent for Wireless Intrusion Detection technology.



**Rose Kirby** is a Master's student at the University of Maryland, College Park and Outreach Coordinator for the university's Cyber Security Club. Having grown up in Silicon Valley, she has been using technology for work and play since she was capable of using a mouse. Her research and career interests are in cyber security issues, with a focus in cyber warfare policy. She has participated in many cyber security activities and competitions, including competing on the UMD team that won the 2011 Mid-Atlantic Regional Collegiate Cyber Defense Competition (CCDC) and attended the National

CCDC in San Antonio, TX. She graduated cum laude from the University of Southern California with research awards for her senior thesis on comparing the cyber warfare policies of the U.S. and China.



**Kelly Koermer** is the Dean of the School of Business, Computing & Technical Studies at Anne Arundel Community College, which houses the CyberCenter. She holds the rank of tenured full professor and has taught in the Legal Studies and Computer Technologies Departments. During her time at AACC, she has served as the Director of Computer Technologies Instructional Programs at Anne Arundel Community College, the Special Assistant to the Vice President of Learning for the Honors Program, and the Coordinator of the Paralegal, Jurisprudence and Cybercrime programs.

In addition to her academic responsibilities, Kelly also served for three (3) years as the Federal Compliance Officer for AACC, handling diversity and federal compliance issues for the college. She received her associates in arts and baccalaureate degrees in paralegal studies from Villa Julie College and her juris doctorate degree from University of Baltimore School of Law. Dean Koermer is admitted to practice law in the State of Maryland and before the United States District Court for the District of Maryland and the United States Court of Appeals for the Fourth Circuit. Dean Koermer has authored a textbook, the *Guide to Criminal Law for Maryland*, published by Wadsworth Group in 2001, and co-authored with Robyn Brown *Criminal Law in Maryland:Cases, Concepts & Critical Analysis*, published by Kendall Hunt in 2006 and *Constitutional Law: Laying Down the Law*, published by Wolters Kluwer 2010.



**Michael Linkins** is a School Counseling Specialist for the Maryland State Department of Education. He has been a teacher, HS & MS counselor, high school principal and personnel hiring officer. Presently he assists school counselors and directors of student services, to implement a comprehensive, developmental school counseling program and an effective student services program mandated by the Code of Maryland Regulations. Additionally he is responsible for the effective management of home and hospital teaching programs, BRAC preparation, crafting Advanced Placement grants for low

income students, and is the Family Liaison on the State Council for Military Compact.



**Margaret (Peggy) Maxson** was appointed in 2010 to her most recent position, Director of National Cybersecurity Education Strategy at the Department of Homeland Security. In this capacity she leads DHS efforts to build capability within the National Initiative for Cybersecurity Education (NICE) as well as coleading the training and professional development component of the initiative. DHS requested Ms. Maxson for this position following her previous position as the Education Portfolio Manager on the Director of National Intelligence Joint Interagency Cyber Task Force (JIACTF). At the JIACTF, she led a cybersecurity education sub- group of the White House Information and Communication Infrastructure Interagency Policy Committee (ICI-IPC), which resulted in the accepted recommendation and subsequent implementation of the establishment of NICE.

Ms Maxson has a Bachelor of Arts in Business Management from the University of Maryland. She is a graduate of the 2005-2006 National Security Fellowship Program at Harvard University, where she focused her studies on leadership and international issues.

After four years in the US Air Force as a Russian linguist, Ms. Maxson was hired by the National Security Agency in 1981 as an analyst/reporter. Ms. Maxson has subsequently served in a diverse range of managerial positions spanning operations, policy, foreign relations, customer service, and technology development. She has served as the NSA representative to the JCS/J2; the NSA representative to the DOD Joint Interagency Counterterrorism Task Force; the Deputy Special Assistant to the Director of Central Intelligence for Foreign Relationships and a variety of positions within the CENTCOM Area of Operations, to include hostile territory assignments. She is twice the recipient of the DIA Director's Medal of Achievement for her role in support of military operations worldwide; the DCI's National Intelligence Medal of Achievement, for her work in international sharing agreements; and NSA's Meritorious Civilian Service Award for her work in support of military operations.



**Marc H. Noble, CISSP-ISSAP, CISM, NSA-IAM, MBCI** is currently the Director of Government Affairs for (ISC)<sup>2</sup>, the globally recognized Gold Standard for certifying information security professionals. Prior to his role at (ISC)<sup>2</sup>, Mr. Noble worked as an Information Assurance Engineer for MITRE Corp., and held the offices of Chief Information Security Officer and Deputy Chief Information Officer at the U.S. Federal Communications Commission. Over the course of a 30-year government career, Marc also served as Senior Information Security Analyst, Administrative Office of the U.S. Courts and as a Management and Systems Analyst at the U.S. General Services

Administration. Mr. Noble currently serves as a member of the (ISC)<sup>2</sup>'s Government Advisory Board for Cyber Security (GABCS) and U.S. Government Executive Writers Bureau and is Senior Vice President of the Northern Virginia Chapter of the Information Systems Security Association (ISSA-NOVA).

He holds received his B.A. History/Political Science from Virginia Commonwealth University and a Master's Certificate in Project Management from George Washington University.



**Davina Pruitt-Mentle, Ph.D.** a researcher and policy analyst at Educational Technology Policy Research & Outreach, has worked in the field of STEM education & educational research since 1990. She holds a PhD from the University of Maryland in educational technology policy and has spent over 13 years conducting research on K12 cyberethics, safety and security awareness programs, & developing programs to help increase the IS/IA workforce pipeline. Davina's educational experiences include research and

program evaluation, project management, presentation delivery, and teacher workshop/college course design and instruction. She has also been instrumental in developing ETPRO's K-12 STEM Outreach model which introduces or re-engages youth to STEM using culturally savvy,

community connected activities, in an informal fun fashion while bridging informal activities to classroom content. She serves as K12 PI for the NSF funded CyberWatch Center, PI of the MD BRAC (Base Realignment and Closure) –EIS-C MD grant & serves on numerous Task Force/Advisory Boards including NCSA, CLICKS, and the MD ED Technology Advisory Board.



**Portia Pusey** serves as Assistant Director for Educational Technology Policy, Research, and Outreach (ETPRO) and is a doctoral candidate in the Department of Instructional Technology at Towson University where she is currently teaching Advanced Instructional Design. Her pilot study, assessing the ability of preservice teachers to model and teach internet safety and ethics to their students, won the 2009 Judith Ruchkin Award. Her academic and professional experiences have focused on instructional technology in K-12 education, best methods for distance education, professional development of preservice and

inservice teachers, wiki learning environments, Concerns Based Adoption Model, and the status and impact of internet security and ethics in P-12 education.



**Richard D. Scott** is a School Counseling Specialist for the Maryland State Department of Education. He has thirty two years of experience teaching and leading school counselors, including directors of student services, to implement a comprehensive, developmental school counseling program and an effective student services program mandated by the Code of Maryland Regulations. He has trained, supervised, and facilitated all levels of student

services professionals, and has been instrumental in developing and implementing career development and youth suicide prevention programs. Mr. Scott is responsible for effective management of home schooling programs and implementation of peer programs.



**Nicole Smith** is a Research Professor and Senior Economist at the Center on Education and the Workforce at Georgetown University. Dr. Smith leads the Center's econometric and methodological work. Prior to joining the Center, Dr. Smith was a faculty member in Economics at Gettysburg College in Pennsylvania, and at the University of the West Indies, St. Augustine Campus. Dr. Smith received her B.Sc. in Economics and Mathematics from the University of the West Indies, St. Augustine campus, and she received

her Ph.D. in Economics from American University.



**Blair Taylor** has a BA in Mathematical Science and an M.S. in Computer Science both from Johns Hopkins University and a DSc in Applied Information Technology from Towson University. Dr. Taylor is a Clinical Assistant Professor at Towson University and is the PI for the Security Injections @ Towson project. *Security injections* are strategically-placed security-related modules for existing undergraduate classes. Blair has over 20 years of teaching experience. In addition to her work creating secure

coding materials for teachers and students, Blair has experience in information assurance education and two and four-year computer science articulation.



**Brian Zhang** is a freshman at Howard Community College who will be attending UMCP this Spring in Computer Engineering. Brian won first place in the regional and National High School Networking Security Competition and won first place in USCC Cyber Camp competition in Maryland. Previously he has interned at JHUAPL (VES department) and is an active bitcoin miner.

# Higher Education Opportunities

## Anne Arundel Community College (AACC)

The Computer Technologies Department at AACC **housed in the School of Business**, **Computing and Technical Studies (BCTS)**, offers four general areas of technology study: Computer Information Systems (*including Information Systems Security*), Computer Science, Computer Network Management, and Web Technologies. Within each of these programs, we offer a variety of degree, certificates, and letters of recognition options. A few of our numerous degrees, certificates, and options are: Computer Science Transfer Degree, Information Systems Security Degree (Cyber-Security), Computer Management Degree, Publication Design on the Internet Certificate, and the Computer Information Systems Certificate with options like Computer Specialist or Scientific Programming.

## **Community College of Baltimore County (CCBC)**

Few things enhance the value of a college education like the real-world experience a student gains in an internship. The Community College of Baltimore County's internship program, in the School of Applied and Information Technology, connects students with employers who offer opportunities to apply and practice what they have learned in class. Over the last six years students have been placed as Junior Programmers, Network Support Analysts, Graphic and Web Designers, and Database Analysts just to name a few. Students who have interned are twice as likely to be hired after graduation as those who have not. And many student interns are hired by their internship hosts. Since 2005 three hundred + students have jump started their careers with internships through the SAIT Internship Program. Under the guidance of the director, Dyane Hill Boone, the program continues network businesses in the greater Baltimore metropolitan area to place students.

CCBC offers an A.A.S. degree in Information Systems Security which is housed in the Network Technology Department in the School of Applied and Information Technology.

### Hagerstown Community College (HCC)

- Programs in this area of study include
  - Information Systems Technology (IST) | Degree
  - IST: Option in Networking Technology | Degree | Certificate
  - o IST: Technician Specialist I | Certificate | Letter



The Networking Technology Program offers curriculum covering network concepts, network operating systems, network management, network design and network security. Wireless fundamental and TCP/IP are included. HCC is a partner in the CyberWatch consortium. CyberWatch provides assistance to its partner institutions for curriculum development and <u>mapping</u> of courses to the National Security Telecommunications and Information Systems Security (NSTISSI) 4011 and 4013 standards. Curriculum development emphasizes

building Associate's degree programs from a set of core technical courses that, in addition to meeting 4011 and/or 4013 standards, help prepare students for several industry certifications including:

- CompTIA's A+, Network+, and Security+
- Cisco Certified Network Associate (CCNA)
- Certified Wireless Network Administrator (CWNA)
- Microsoft Certified Professional (MCP)
- Security Certified Network Professional (SCNP)

#### Johns Hopkins University (JHU)



The Carey Business School builds on the Johns Hopkins University tradition of excellence in practice and research with MBA programs in the Baltimore-Washington area, as well as master's degree and certificate programs, and undergraduate programs. http://carey.jhu.edu/itsprograms/

- **Organization**: The Carey Business School of Johns Hopkins University is one of nine schools within the Johns Hopkins University.
- Accreditation: Johns Hopkins University is fully accredited by the Middle States Association of Colleges and Universities, the accrediting body for all colleges and universities in the mid-Atlantic region.
- Master's and certificate programs offered: The Carey Business School offers flexible format MBA programs, as well as master's degrees in finance, real estate, information and telecommunications systems, organization development and human resources, and marketing. Certificates offered include the Leadership Development Program for Minority Managers, Investments, as well as other innovative graduate certificate programs.

**Joint Programs offered**: The Carey Business School of Johns Hopkins University offers several specialized degree and certificate programs in conjunction with the School of Medicine (the Business of Medicine), the School of Nursing (MBA/Master of Science in Nursing), and the School of Arts and Sciences (MBA/Master of Science in Biotechnology, MBA/Master of Arts in Communication, MBA/Master of Arts in Government).

## **Montgomery College (MC)**

MC offers an A.A.S. degree in Cybersecurity which is housed in the School of Business/Science/Math/Technology. This A.A.S. degree prepares students for entry-level career in cybersecurity. The program emphasizes computer security and information assurance concepts augmented with current industry standard techniques. Topics cover threats and vulnerabilities, prevention at the technical (hardware and software) and human levels, detection, responses, and management aspects of security.

The program prepares entry-level computer technicians with information security expertise and also offers students a transfer option to four-year institutions. The proposed program of study is designed to address the needs for increasing the number of trained workers qualified to work in information security in the homeland security industry. The program is expected to meet National Security Telecommunications and Systems Security Instruction (NSTISSI) 4011 and 4013 standards. It will also help prepare students to sit for a variety of industry certifications, including the Computing Technology Industry Association's (CompTIA)A+, Network+ and Security+ certifications; Cisco's Certified Network Associate (CCNA) certification, and the Security Certified Network Professional certification.

## National Initiative for Cybersecurity Education (NICE)

The National Initiative for Cybersecurity Education (NICE) has evolved from the Comprehensive National Cybersecurity Initiative, and extends its scope beyond the federal workplace to include civilians and students in kindergarten through post-graduate school. The goal of NICE is to establish an operational, sustainable and continually improving cybersecurity education program for the nation to use sound cyber practices that will enhance the nation's security.

The National Institute of Standards and Technology (NIST) is leading the NICE initiative, comprised of over 20 federal departments and agencies, to ensure coordination, cooperation, focus, public engagement, technology transfer and sustainability. Many NICE activities are already underway and NIST will highlight these activities, engage various stakeholder groups and create forums for sharing information and leveraging best practices. NIST will also be looking for "gaps" in the initiative -- areas of the overarching mission that are not addressed by ongoing activities.

### National Security Agency (NSA)

The Mathematics Education Partnership Program (MEPP) is a National Security Agency outreach program to promote mathematics and science education at non-profit educational institutions. Working within the Associate Directorate of Education and Training, the MEPP staff coordinates the activities of hundreds of Agency volunteers.

Much effort is concentrated on helping local area schools through four main programs listed below.

- The Mathematics Speakers Bureau: Speakers visit schools and present a variety of interactive mathematics and science talks authored by the volunteers. <u>Current Speaker's Bureau Catalog of Topics</u> Forms: NSA Mathematics Speaker's Bureau Request Form NSA Math Speaker's Bureau Evaluation Form for Teachers
- The School Partnerships Program: Continuing relationships are maintained between schools and volunteers who spend part of their work week providing tutoring, computer help, or math and science enrichment activities.
- Math/Science Fair Judges: NSA provides judges to local K-12 math/science fairs.

## Prince Georges Community College (PGCC)

**PGCC's Computer Information Systems Department** offers quality instruction through comprehensive degree and certificate options in the areas of programming, computer networking, Web technology, and systems engineering/analysis. It also provides opportunities for all students at the college to gain technology fluency through its general education offering, Computer Literacy. CIS faculty facilitate innovative learning experiences that equip students with the technical and problem-solving competencies required to obtain employment in the computer industry or continue education at a four-year institution . In addition, the faculty work diligently to create partnerships with local technology employers and are active participants in private and government technology initiatives to ensure currency in both instructional methods and curricula. The department also provides student support mechanisms and dynamic programs that foster retention. <u>http://academic.pgcc.edu/cios/mission.htm</u>

## STOP THINK CONNECT

**Stop. Think. Connect.**<sup>TM</sup> is the first-ever coordinated message to help all digital citizens stay safer and more secure online. The message was created by an unprecedented coalition of private companies, nonprofits and government organizations. The campaign hopes to achieve for online safety awareness what "Smokey Bear" did for forest fire safety and "Click It or Ticket" did for seatbelt safety. See more at http://stopthinkconnect.org/

### **Towson University**

Housed in the College of Science and Mathematics, the Computer and Information Sciences (COSC) Department is one of the largest departments at Towson University, offering forty-five undergraduate courses, more than twenty graduate courses, and serving approximately 800 undergraduate and graduate majors. COSC has 32 full-time faculty members and recruit new faculty every year. COSC faculty are committed to excellence in teaching and providing students with professional guidance and advice, and emphasize quality in education which includes solid theoretical foundations and the latest technological developments. The Department offers a B.S. in Computer Science with a track in Computer Security,

#### United States Naval Academy (USNA)

The United States Naval Academy (<u>http://www.usna.edu</u>) was founded in 1845; it is located in Annapolis, Maryland. The Academy is an highly selective undergraduate institution with about 4,500 midshipmen. The mission of the Naval Academy is to develop Midshipmen morally, mentally, and physically, and to imbue them with the highest ideals of duty, honor, and loyalty in order to graduate leaders who are dedicated to a career of naval service and have potential for future development in mind and character, to assume the highest responsibilities of command, citizenship, and government. There are 23 majors

(http://www.usna.edu/acdean/majors/majors.html) in the areas of engineering and weapons, mathematics and science, and the humanities and social sciences. The Naval Academy is a National Security Agency Center of Academic Excellence in Information Assurance. The Naval Academy has a Center for Cyber Security Studies whose mission is to enhance the education of midshipmen in all areas of cyber warfare, to facilitate the sharing of expertise and perspectives in cyber warfare from across the Academy, to enhance inter-disciplinary research in cyber warfare, and to disseminate information, harmonize efforts, and shape a common framework for cyber-warfare-related efforts at the Academy. The programs in computer science and information technology (http://www.cs.usna.edu)offer a number of courses relating to cyber security; both of these programs are ABET accredited. All first-students are required to take a course in cyber security.



NOTES



Careers in Cyber Security Workshop for Educators was organized by:

# Did you enjoy the conversation we started today? Would you like to be kept informed of future events? Join the discussion! Stay informed! Like us on Facebook – CyberWatch K12 Division Or Follow us on Twitter - @cyberwatchk12

### Contact us for information about our other initiatives:

C3 Conference: Cyberethics, Cybersafety, Cybersecurity Cool Careers in Cybersecurity for Girls Cyber Academy Activities Summer CyberSTEM Programs Mindtools and CyberSTEM Curriculum Professional Development After-school Enrichment Programs

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