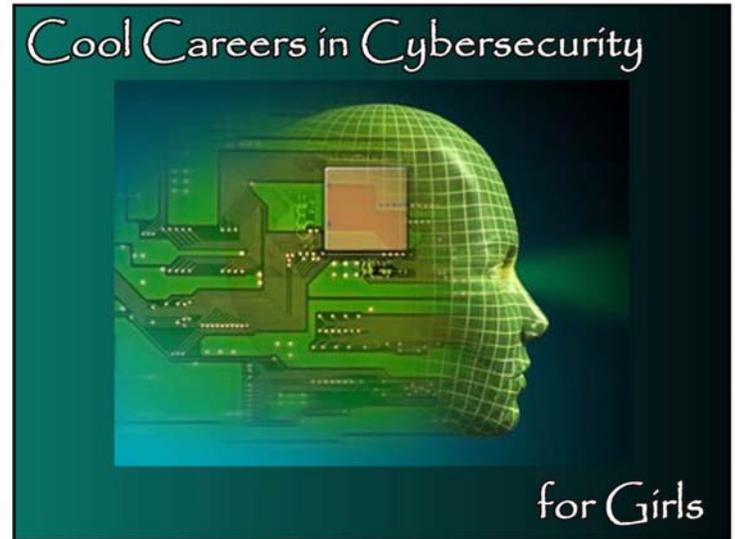




Info Security Crime Investigator • Malware Analyst • Incident Responder • Forensic Analyst

Security Architect • Penetration Tester • Network Security Engineer



Vulnerability Researcher • Exploit Developer • Security Auditor

Computer Crime Investigator • Security Operations Center Analyst • Intrusion Analyst



# Cool Careers in Cybersecurity for Girls Workshop C34G

November 12, 2014

10 a.m. to 1:00 p.m.

Riggs Alumni Center at the  
University of Maryland - College Park, MD

experience and a love of teaching to her classroom and students. When not working, Rose volunteers with dog rescues organizations and enjoys spending time with her family.



**Vonda Williams** has 25 years of professional experience in acquisition & procurement, simulation & modeling, design, integration of software applications, systems analysis, operations research analysis, test & evaluation of systems, alternative of analysis(AoA), Change Management & Configuration Management (CM) across the Software Development Lifecycle (SDLC) for the Enterprise in support of the Cross Domain Solutions Program Management Office and Independent Verification & Validation (IV&V) of several complicated software systems including Y2K system assessment and certification. She has over 10 years in Information Assurance supporting system security certification & accreditation, vulnerability assessment & Risk analysis, intrusion detection implementation, mission assurance to include continuity of operations planning (COOP) & Disaster Recovery (DR) planning, Integration of Enterprise Architecture including cross-domain solutions, and development of ISSM/ISSO training materials.

has published numerous articles in research and education journals including the ACM Journal of Education Resources and the ACM Inroads. In 2005, she received the IUP School of Graduate Studies and Research Sponsored Programs Award for Outstanding Achievement in Curriculum and Instruction for the Cybersecurity and Information Assurance Curriculum Projects. Rose Shumba has presented at numerous regional, national, and international conferences including the prestigious ACM Special Interest Group in Computer Science Education. She received her MSc in Computer Science and PhD in Computer Science from the University of Manchester (UK), and University of Birmingham (UK) respectively.



**Anh (Ann) Tran** has over 20 years of engineering and management experience. She has successfully managed complex, technology-based, mission critical programs, which were both geographically disbursed and schedule driven. She has extensive experience working with the FAA, civil agencies as well as international customers and their stakeholders to ensure program success. As the Senior Manager of the Engineering & Technology - Mission Systems Air Traffic Management Solutions for Lockheed Martin Information Systems and Global Solutions, she manages a team of over 1200 engineers and support personnel. In this role, Anh is responsible for the performance and expansion of a variety of programs domestically as well as internationally. In addition, she leads the engineering team, as well as subcontract program management and procurement, configuration management, site activation, Infrastructure Lab Engineering and facilities. Anh began her career in 1989 as a computer programmer at Lockheed Martin (former IBM Federal Systems) in Gaithersburg, Md. There, Anh was part of the team developing the TCP/IP protocol suite for various IBM products. This is the underlining infrastructure we use today in delivering email and transferring files from one location to another. In 1991, Anh joined the Air Traffic Management Solutions team in Rockville, Md. She worked in a variety of engineering roles with increasingly higher levels of responsibilities. Anh has her Bachelors of Science in Computer Science with a minor in Mathematics from the University of Maryland, College Park.



**Rose Volynskiy** has 30+ years of extensive teaching experience in a community college-level setting, web development and programming experience. She has taught various on-line, hybrid and face-to-face computer courses and has been involved in full cycle of website and software development beginning with requirement analysis through designing, programming, testing and deployment. She previously worked as a web developer and a computer programmer for companies both in the United States and around the world. She brings vast

## EVENT INFORMATION

### WORKSHOP POLICIES

Please wear your name badges at all times. As a courtesy to speakers and other attendees, we ask that you turn off or set your cell phones and pagers to vibrate mode during all sessions.

### BATHROOM BREAKS

As a courtesy to speakers and other attendees, we ask that the bathroom breaks be done during the transition time between rotations. Girls must be escorted to and from the bathroom facilities. Please note: as a courtesy to our keynote speakers, we ask that no one leave during the keynote presentation.

### EVENT EVALUATIONS

Towards the end of the event, you will be asked to complete an evaluation form (overall event and presentation sessions). Please complete the evaluation as your input helps us be aware of your needs and develop next year's event.

### INTERESTED IN SIMILAR EVENTS OR ACTIVITIES?

Visit [edtechpolicy.org/cyberk12/](http://edtechpolicy.org/cyberk12/)

## WELCOME

The National CyberWatch Center K-12 Division, led by Educational Technology Policy, Research and Outreach is excited to partner with the Maryland Cybersecurity Center and the Center for Women in Computing to offer another outstanding Cool Careers in Cyber Security for Girls Workshop at the University of Maryland, College Park Campus.

C34G educates, inspires, and provides girls with the information, skills and resources necessary to navigate the professional pipeline in the vast field of cybersecurity.

The C34G vision is put into action through programs and a focus on cyber stewardship, activities to make a safer and more secure society, by delivering high-quality, innovative activities that inspire girls to pursue careers in cybersecurity.

The event would not be possible without women professionals volunteering their time. Please take the time to thank the women from the following organizations who volunteered their time to share with you today.

- Boeing
- Howard Community College
- Lockheed Martin
- National Security Agency (NSA)
- Northrop Grumman
- Schnell-Tech Solutions
- Tenable
- University of Maryland, College Park
- University of Maryland University College
- U.S. Department of Agriculture
- U.S. Department of Education

proven results. She currently serves as both the Information System Security Program Manager (ISSPM) and the Agency's Chief Information Security Officer (CISO) within the Washington metropolitan area. She is responsible for the design and implementation of comprehensive security systems, policies and procedures which protect Agency IT resources.

**Gail Schnell** is the President & CEO of Schnell-Tech Solutions LLC. After returning from her US Army deployment for Operation Enduring Freedom in Afghanistan, she has been working hard to turn her dream of owning a company into reality. She sees this company as another way to help others - by offering solutions, going green, supporting veterans, and giving back to the community.



**Alice Shaffer** began her career at the National Security Agency as a member of the High School Work Study program. She has worked in various offices such as Corporate Travel, Corporate Communications, and International Relations. For the past 12 years, Ms Shaffer has served as the Department of Defense (DoD) Information Assurance Scholarship Program (IASP) -

Program Director, which is part of the National Information Assurance Education and Training Program at NSA. The DoD IASP is designed to assist in recruiting and retaining highly qualified Cybersecurity, Information Assurance (IA) and Information Technology (IT) personnel the DoD needs to manage, operate and secure our information infrastructure. Through her work with the DoD IASP, Ms. Shaffer has helped to increase the pipeline of cyber security/IA trained professionals entering and remaining in DoD's workforce. She also serves as a member of the National Science Foundation's Federal Cyber Scholarship for Service (SFS) Interagency Coordination Committee (ICC), whose vision is similar to that of the DoD IASP. Recently Ms. Shaffer has taken on the role of National Center of Academic Excellence K-12 and STEM Education Coordinator, working closely with designated CAEs to encourage STEM education outreach, with special emphasis on women and minorities in cybersecurity education/careers. In addition, Ms. Shaffer is also certified as Federal Grants Manager.



**Rose Shumba** is a Program Director and Professor for the Cybersecurity program, Graduate School at UMUC. Before joining UMUC, she was a Professor of Computer Science and Director of the Indiana University of Pennsylvania (IUP) NSA Institute of Information Assurance Education. Rose Shumba's primary research areas include information assurance education, digital forensics, secure

software development, cloud computing, human computer interaction and security, and gender and computer science/information assurance. Rose Shumba

**Pam Mitchell** has over thirty years of experience as an entrepreneur, software engineer, certified network engineer, certified computer technician, technical educator and website designer. As an entrepreneur, Pamela brings state of the art computer technology and support to small businesses, non-profits, and consumers. She keeps her customers informed of cyber-attacks and helps them implement budget appropriate system protections. As a software engineer, Pamela has designed, developed, tested, implemented and supported 100+ of computer information systems for the government and private sectors, presenting new software ideas to top government officials and directors of Fortune 500 Companies. In addition to her business activities, Pamela has volunteered over 30,000 hours of her time to nonprofit organizations and job skills programs, helping individuals to improve their information technology and computer skills.

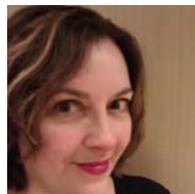
**Lisa McKelvie** is a Sr. Information Assurance Officer with DISA.



**Kathy Moon** is a chief architect for Northrop Grumman's Enterprise Shared Services organization, leading development of its long range strategic planning. She also supervises the information technology (IT) product standards process and has facilitated IT organization and business partner cross-functional governance teams to prioritize IT investments to drive business. Moon is actively involved in her community, serving as the area

governor of Toastmasters International, Los Angeles district, working with club officers and district leaders to develop communication skills for members. She also tutors elementary through college level students in math and received recognition as a Women of Color magazine Technology All Star in 2010.

**Kelly O'Brien** is a Sr. Program Manager Lockheed Martin.



**Moira Purham** is a Senior QA Analyst at Tenable. She has been working in the Information Technology field for over 20 years, in assorted positions, primarily Help Desk, and QA. Prior to Tenable she was a linguist in the United States Air Force.

**Ebony Pierce** has worked with Lockheed Martin for over 5 years in various roles including Software Developer and Security Analyst.

**Angela Pompey** is a Chief Information Security Officer for USDA/ERS. She graduated from the University of Maryland University College with a Bachelor of Science in Criminal Justice. She has 24+ years of Federal service serving as a Team Lead and advisor on extensive IT managerial projects and studies with

**SCENARIO:** Middle school girls become Cyber Super-Investigators (CSI) for a day to solve a cyber-crime. During this interactive crime solving event, girls learn from women in diverse companies and agencies about what it takes to navigate the professional pipeline in the vast fields of Cybersecurity and Information Assurance, as well as other science, technology, engineering, and mathematics (STEM) fields.

The middle school girls complete hands-on activities with guidance from cybersecurity and STEM professionals in order to gather clues to help solve the crime. This year's cybercrime scenario focuses on *vulnerabilities in networked medical equipment*.

On an episode of the *Showtime* series *Homeland*, Vice President Walden's pacemaker was hacked becoming the weapon for his assassination. In a *60 Minutes* interview with former Vice President Dick Cheney, he confirmed that the possibility of his pacemaker being hacked had been discussed and the device's wireless access had been disabled to prevent such an attack on his life.

Although it may sound like science fiction several studies have proven that flaws in cyber security of medical devices could be exploited to induce death.

- Computer scientist Kevin Fu has demonstrated in a research lab that he could hack into a combination heart defibrillator and pacemaker to induce potentially fatal electric jolts.
- Researchers at computer security firm McAfee share they have found a way to hack into an insulin pump to make it release multiple days' worth of insulin.
- Security analysts Terry McCorkle and Billy Rios discovered a simple password vulnerability affecting over 300 devices including ventilators, drug infusion pumps, external defibrillators, patient monitors, and laboratory and analysis equipment. Devices could be exploited to change critical settings or modify the device.

In the case of our scenario, the 2014 Cool Careers Cyber Crime: *Networked Medical Equipment Vulnerabilities*, the all girls' middle school Cyber Super-Investigators (CSI) have been hired to examine in greater detail how medical devices could be breached and make recommendations to the U.S. Food and Drug Administration. The girls will collect and explore a variety of digital and physical evidence to learn more about medical device vulnerabilities. Clues provided by the lead investigators, the cyber professionals speaking at the Cool Careers in Cybersecurity for Girls Workshop, will help the middle school girls in their investigation!

# AGENDA

|                  |  |
|------------------|--|
| 9:30 am          | Arrival<br>Meet the Cyber Career Speakers                                  |
| 10:00-10:05 am   | Welcome and Introductions<br>Dr. Davina Pruitt-Mentle<br>Dr. Michel Cukier |
| 10:05 - 10:20 am | Setting the stage for scenario and activities/Video                        |
| 10:20 - 10:40 am | Activity 1/ Rotation 1   |
| 10:43 - 11:03 am | Activity 2/ Rotation 2   |
| 11:05 - 11:25 am | Activity 3/ Rotation 3   |
| 11:27- 11:50 am  | Activity 4/ Rotation 4   |
| 11:50 – 12:15 pm | Organize at Lunch Tables   |
| 12:15 – 12:35 pm | Activity 5<br>Lunch Keynote Speaker: Panel Session                         |
| 12:35-1:00 pm    | Activity 6<br>Discussion of the CyberCrime, Thank You's<br>and Evaluations |



**Harriette Julian** is a Business Process Analyst at Northrop Grumman Corporation



**Kristen Lantz** is a Program Manager and Engineering Leader at Lockheed Martin in Hanover, MD. She began her professional career as a Software Engineer after receiving her degree in Mathematics from the University of Colorado in Boulder. Kristen worked on several programs developing software to support customer requirements. While working, she completed her Master's Degree in Information and

Telecommunication Systems at the Johns Hopkins University. She expanded her technical roles to include Database and System Engineering. Kristen held multiple technical leadership roles as well as Engineering support positions and then moved into Program Management. Her career has given her the opportunity to travel around the world and to experience various cultures while doing business in other countries. Kristen is married and has 4 very active children. She loves to play softball, work in her garden and keep up with her kids.



**Pamela Lougee** is the Information Assurance Analysis Skill Community Director with the National Security Agency's Associate Directorate for Education and Training, College of Cyber. The College of Cyber provides a broad array of cyber-related training and education activities in the fields of computer network operations, information assurance, information operations, operations security, security engineering, computer

science, and systems engineering. She also serves as Chair to NSA's Women Employee Resource Group. Ms. Lougee joined the National Security Agency in June, 1987, and has held a variety of leadership, personnel development, and technical support positions within the Information Assurance Directorate's Operations and Trusted Solutions Engineering Groups. Ms. Lougee graduated from the University of Maryland University College with a Bachelor of Arts degree in Communications Studies, and she is a graduate of NSA's Mid-level Leadership Development Program. Ms. Lougee resides in Hampstead, Maryland, with her husband, Tony. She has three children and two step-children. She is an active soccer mom and also enjoys singing, Orioles baseball, and Broadway musicals.

Vermont, and worked in residential life and judicial programs settings before moving into the IT realm.



**Cyndi Gula** is Vice President of Operations at Tenable Network Security. At Tenable, Mrs. Gula is responsible for Human Resources, and Product Licensing operations. Her teams lead recruiting, retention, benefits programs and facilities management globally. Cyndi oversees Tenable's product licensing operations team that currently processes licensing and renewals for over 15,000 commercial, government and international customers annually. She was the founder and President of Network Security Wizards, an advanced network intrusion detection technology company that was acquired by Enterasys Networks in 2002. She has a BS in Glass Engineering Science from Alfred University and began her career in Quality Assurance and Process Engineering positions at Carr Lowrey Glass Company in Baltimore, and Syracuse China in Syracuse, NY.

**Stacey Hertz** serves as a Software Engineering Manager for Lockheed Martin Corporation. She holds a BS Engineering Science from Loyola College and a MS Electrical Engineering from Johns Hopkins Univ. She started employment with the predecessor company Ford Aerospace designing hardware, and did integration and testing of large communication systems. When Ford was bought by Loral Aerospace, she took a C programming language course and started programming communication equipment with C and assembly language. She had her first child and started working part-time which allowed her to balanced work and home very well. When Loral was bought by Lockheed Martin she continued with software development positions and became a manager in addition to performing software development on the program. She now has two children; both of which are now in high school and she will be starting full-time next week.

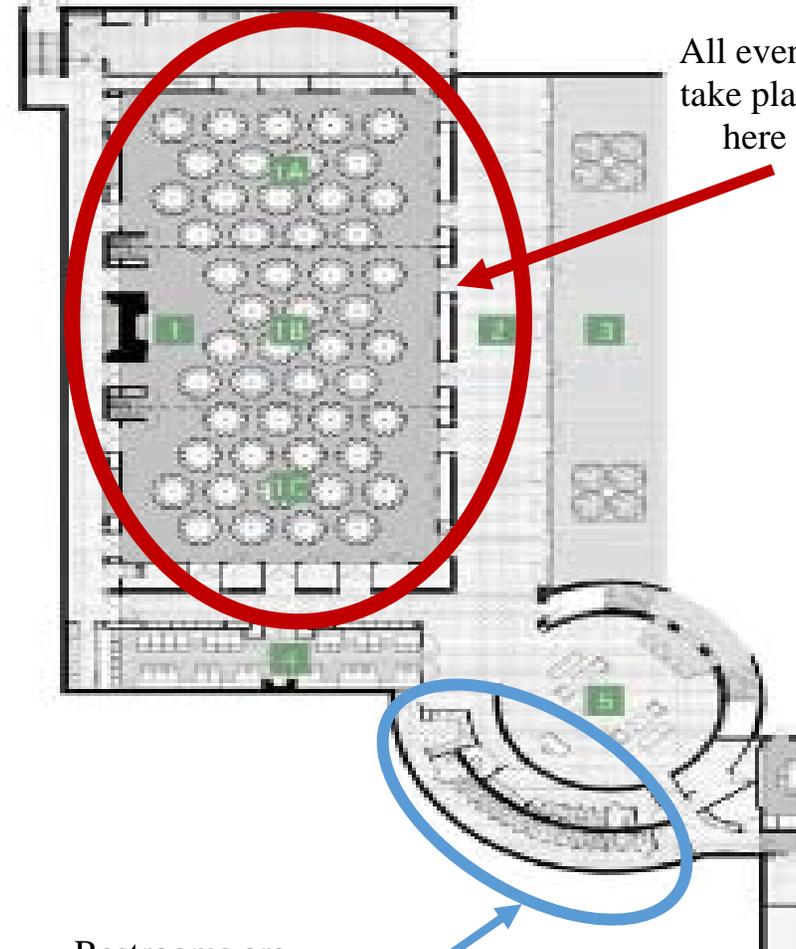


**Katie Hirsch** is a Software Engineer at Tenable Network Security whose career has focused primarily on user interface development. Prior to her work on Security Center for Tenable, she worked for 8 year in the video games industry where her shipped title included Command and Conquer 3: Kane's Wrath, Civilization V, X-Com Enemy Unknown and FEAR3. She has a B.S. in Computer Science and a B.A. in Visual Arts from

UMBC.

**Laura Hobbs** is the Customer Care Manager for Tenable Network Security. She has previously worked as Technical Support and EDI Implementation Specialist. She has been involved with Shmoocoon and the local tech/hacker community for the last 9 years.

## Map



All events take place here

Restrooms are located here

**Rotations for each of the schools**

| WHO                  | START & Activity 1 | Activity 2 | Activity3 | Activity 4 & Stay for lunch |
|----------------------|--------------------|------------|-----------|-----------------------------|
|                      | TABLE              | TABLE      | TABLE     | TABLE                       |
| Clarksville 1        | 11                 | 20         | 29        | 2                           |
| Clarksville 2        | 12                 | 21         | 30        | 3                           |
| Clarksville 3        | 13                 | 22         | 31        | 4                           |
| Clarksville 4        | 14                 | 23         | 32        | 5                           |
| Clarksville 5        | 15                 | 24         | 33        | 6                           |
| St Louis 1           | 6                  | 15         | 24        | 33                          |
| St Louis 2           | 7                  | 16         | 25        | 34                          |
| St Louis 3           | 8                  | 17         | 26        | 35                          |
| St Louis 4           | 9                  | 18         | 27        | 36                          |
| St Louis 5 & Indiv A | 10                 | 19         | 28        | 1                           |
| Gaithersburg 1       | 21                 | 30         | 3         | 12                          |
| Gaithersburg 2       | 22                 | 31         | 4         | 13                          |
| Gaithersburg 3       | 23                 | 32         | 5         | 14                          |
| Gaithersburg 4       | 24                 | 33         | 6         | 15                          |
| Gaithersburg 5       | 25                 | 34         | 7         | 16                          |
| Lake Elkhorn 1       | 16                 | 25         | 34        | 7                           |
| Lake Elkhorn 2       | 17                 | 26         | 35        | 8                           |
| Lake Elkhorn 3       | 18                 | 27         | 36        | 9                           |
| Lake Elkhorn 4       | 19                 | 28         | 1         | 10                          |
| Lake Elkhorn 5       | 20                 | 29         | 2         | 11                          |



**Karen Edwards** Karen Edwards is a Senior Testing Manager and Acting Requirements Manager at the Department of Education, Federal Student Aid. She received her Bachelor of Science degree in business administration from Washington Adventist University in Takoma Park, MD and started her career in Information Technology soon after. Karen's career has worked as a software developer, software tester and manager of software developers, software testers and business analysts. She is a Certified Software Test Manager and a Certified Scrum Master. Karen lives in Maryland.



**Dr. Emma Garrison** serves as an Associate Adjunct Professor at the Graduate School of Management and Technology at the University of Maryland University College. Prior to UMUC she served as the Assistant Administrator for Information Technology (IT) and Chief Information Officer (CIO) for the Transportation Security Administration (TSA) under the Department of Homeland Security (DHS). She provided all aspects of IT services for over 60,000 employees at 450 federalized airports and 23 international locations. Before that she served 25 years with the National Security Agency (NSA), starting as an Electronic Engineer and holding leadership positions in Technology and Systems, Signals Intelligence, Information Assurance, and Research & Development. She served as the Deputy Counterterrorism for SIGINT Development Services and as a Senior Operations Officer operating on behalf of and with the authority of the Director of NSA in the command and control of time-sensitive signals intelligence and information assurance missions. She holds a Bachelor of Science in Electrical Engineering from the University of Memphis, a Master of Science in Telecommunications Management and a Doctorate in Management with a focus on technology and information systems; both from the University of Maryland University College.



**Amy Ginther** is the Coordinator of Project NEThics at the University of Maryland, a group charged with promoting the responsible use of information technology and investigating incidents of computing resources misuse. Recent areas of focus have included co-managing the university's music subscription service project, presenting on IT security/identity theft, policy process planning and consultation, and managing the day-to-day demands of policy enforcement. Amy earned a master's degree in Higher Education and Student Affairs at the University of



**Lolita (Lolli) Buran** is the GSM-O Task Order 11 Network Assurance Program Manager. In this role she leads a global team of cyber intelligence analysts working in partnership with the government to transform the 24x7 network defense mission for DISA and its customers. Prior to this role she has held leadership positions in program management and engineering. Lolli holds a bachelor's degree in Management and Information Systems from Hood College and a Master's Certificate in Applied Project Management from Villanova University. She is a graduate of the Lockheed Martin executive and program development program and has achieved certifications in Certified Information Systems Security Professional (CISSP®), Project Management Professional (PMP) and ITIL Foundation.

**Elise Campbell** majored in Mechanical Engineering at Virginia Tech and obtained her masters in Systems Engineering at Johns Hopkins University. She is currently a construction project manager for the Department of Defense.



**Alice Chang** is a senior research engineer at Tenable Network Security, on a team responsible for detecting server and software vulnerabilities via network traffic. After obtaining her degree in computer science from UC Santa Barbara, she moved to the east coast to work at Symantec's Security Operations Center as an analyst, and then to McAfee's Network Threat Response team for a

research and engineering role that focused on malware analysis and detection. Despite grown up believing that writing novels was in her future, she has since been pleasantly surprised to find herself living in one, and is firmly convinced that the storyline could use more female protagonists. She has a B.S. in Computer science at the University of California at Santa Barbara.



**Colleen Calimer** entered the Department of Defense at the age of 17, right out of high school and was employed as an Analytic Aide, which was below that of a secretary. She held numerous jobs which garnered her experience in a number of career fields. Ms. Calimer was able to get into an Analyst Internship and eventually became a Senior Intelligence Analyst. Ms. Calimer took lots of classes and professional development courses and when she retired from the

Department of Defense she was hired to perform Systems Engineering duties with The Boeing Company. Ms. Calimer advocates that Systems Engineering is a discipline with which anyone can aspire. It requires the ability to understand processes, systems and technology. Additionally Systems Engineering is a team endeavor which uses the gifts of all involved in order to be successful.

| WHO               | START & Activity 1 | Activity 2 | Activity3 | Activity 4 & Stay for lunch |
|-------------------|--------------------|------------|-----------|-----------------------------|
|                   | TABLE              | TABLE      | TABLE     | TABLE                       |
| Hyattsville 1     | 26                 | 35         | 8         | 17                          |
| Hyattsville 2     | 27                 | 36         | 9         | 18                          |
| Hyattsville 3     | 28                 | 1          | 10        | 19                          |
| Hyattsville 4     | 29                 | 2          | 11        | 20                          |
| Hyattsville 5     | 30                 | 3          | 12        | 21                          |
| Harpers Choice1   | 1                  | 10         | 19        | 28                          |
| Harpers Choice2   | 2                  | 11         | 20        | 29                          |
| Harpers Choice3   | 3                  | 12         | 21        | 30                          |
| Harpers Choice4   | 4                  | 13         | 22        | 31                          |
| Harpers Choice5   | 5                  | 14         | 23        | 32                          |
| Thomas Pullen 1   | 31                 | 4          | 13        | 22                          |
| Thomas Pullen 2   | 32                 | 5          | 14        | 23                          |
| Thomas Pullen 3   | 33                 | 6          | 15        | 24                          |
| Thomas Pullen 4   | 34                 | 7          | 16        | 25                          |
| Thomas Pullen 5   | 35                 | 8          | 17        | 26                          |
| Bullis            | 36                 | 9          | 18        | 27                          |
| Student reporters | 37                 |            |           |                             |

## Speaker Biographical Sketches



**Dr. Dawn M. Beyer**, (Ph.D., PMP, CISSP, CSSLP, CISM) is a Lockheed Martin (LM) Fellow. She has over 24 years of experience in information security; security engineering; security risk assessments and management; threat and vulnerability assessment; developing security policies and processes; and performing certification and accreditation on classified and unclassified systems. Dawn provides security engineering and cyber security support to captures/proposals, development, and operations and maintenance efforts. She provides direction and consultation on technical planning, requirements definitions, systems architecture and design, systems development and integration, verification and validation, cost and risk, supportability and effectiveness analysis, and system deployment. She also provides guidance, direction, leadership, training, and mentoring to Intelligence Analysts and LM Engineers. Dawn is a retired Intelligence Officer from the U.S. Air Force with 24 years of service and has performed additional responsibilities in the following roles: Information Systems Security Officer/Manager, Computer Systems Security Officer, Communications Security Manager, Computer Security Manager, Operations Security Manager, Emissions Security Manager, and Information Security Manager. Dawn earned her Bachelor of Science degree in Information Systems, her Master of Science degree in Information Systems, and her Ph.D. in Information Systems. She developed the LM Secure Engineering Assurance ModelSM. Dawn maintains the following certifications: PMP, CISSP, CSSLP, and CISM.



**Jacquelyn Blanchard** is a Full Spectrum Cyber Security Leader with 12 years of IT experience including 4 years of SAP application security and 4 years of audit. Jacquelyn has been employed with Lockheed Martin for 12 years and has held a number of positions, each with increasing levels of responsibility. Currently, Jacquelyn is a Cyber Intelligence Analyst Staff on the DC3 program. Jacquelyn earned her B.S. in Business Administration with emphasis in Computer Science from Sullivan University in 2001 and her M.A. in Business and Organizational Security Management from Webster University in 2006. She holds certifications in GIAC Penetration Testing (GPEN), GIAC Certified Forensic Examiner (GCFE), Certified Information Systems Security Professional (CISSP), Certified in Risk and Information Systems Control (CRISC), Lean Six Sigma (LM21) Green Belt and Information Technology Infrastructure Library (ITIL) V1 foundation. She holds memberships in the Information System Security Association (ISSA) and Information Systems Audit and Controls Association (ISACA).



**Dr. Laurel Boraz** grew up in Charlottesville, VA. She attended Smith College where she majored in mathematics. She continued her studies in mathematics at McMaster University in Hamilton, Ontario earning her M.Sc. in 2005 and her Ph.D. in 2009. She spent three years teaching undergraduate mathematics at Smith College and Hobart and William Smith Colleges before starting her current career as an Applied Research Mathematician for the National Security Agency.

**Caryn Boyd** works as an Information Technology Specialist for the United States Department of Education.

**Valerie Boykin** works as an Information Technology Specialist in Federal Student Aid for United States Department of Education. She holds a B.S in Mathematics and Computer Science and a Masters in Computer Science.



**Gail Briemann** is the Curriculum Manager for Computer Science and Naval Postgraduate School classes offered by the National Security Agency's Associate Directorate for Education and Training, College of Cyber. The College of Cyber provides a broad array of cyber-related training and education activities in the fields of computer network operations, information assurance, information operations, operations security, security engineering, computer science, and systems engineering. Ms. Briemann joined the National Security Agency in September, 1988 as a High School Work Study. Ms. Briemann graduated from the University of Maryland Baltimore County with a Bachelor of Science degree in Information Systems Management. Throughout her career, she has held a variety of administrative and technical positions within the Information Assurance Directorate. Ms. Briemann resides in Pasadena, Maryland and has one daughter. She enjoys photography, cooking and crafts.

**Dr. Monica Brodzik** is a Mathematician at the National Security Agency

**Bernadette Bucher** is a Systems Integration/Test Engineer at Lockheed Martin.