CWIT *update*

THE CENTER FOR WOMEN IN TECHNOLOGY AT **UMBC**
AN HONORS UNIVERSITY IN MARYLAND

Note from the Director

By Dr. Penny Rheingans, CWIT Director

The fall semester has seemed like a whirlwind. With the continued growth of our programs, our community grew to include a record 83 Scholars this fall. We've also welcomed more Affiliates to our programs and community. Sometimes it feels like we're bursting at the seams (for instance, when we try to find a room large enough to hold everyone), but it's a nice problem to have.

We celebrated two graduations at commencement – Jessica Izumi, who took just a little extra time to finish up, and Marie Wagner, who is graduating early in order to move right on to the next thing. Both have been integral parts of the CWIT community and we're looking forward to see what amazing things they do next.

With a wrap on fall, our thoughts are turning to the next phase. Applications for the next Scholar cohort have already begun to arrive – a bit like a holiday gift that will be waiting for us in January. Plans for spring programs are well underway – spring scholar retreat, Bits and Bytes, Spring into Leadership, and much more. Spring looks to be another happy and productive whirlwind. As always, we could not do what we do without the generous support of our supporters and partners across UMBC and beyond. We are grateful for their strong and unwavering support. Have a happy holiday season and come look us up in the New Year.

Cyber Corner

By Cindy Greenwood, CWIT Assistant Director

It's amazing the difference a year can make! The Cyber Scholars Program grew from nine Scholars in Fall 2013 to 23 Scholars in Fall 2014. The Cyber Affiliates numbers have grown as well, with 38 students signing up in 2013-2014 and nearly 70 students already identifying as Affiliates for the 2014-2015 school year. A few highlights of the second year of this program so far include:

Mr. Wes Bush, President and CEO of Northrop Grumman Corporation, visited campus on October 17. A few Scholars met with Dr. Hrabowski, Mr. Bush, and other Northrop Grumman representatives to talk about their experiences. Many Scholars & Affiliates also attended a talk to learn more about Northrop Grumman, Mr. Bush's career path, and his advice for current students.

We also sponsored three teams of Cyber Scholars & Affiliates in the Maryland Cyber Challenge (MDC3), with one of those teams reaching the final round. Each of our teams was 50% women, far higher than any other college team. Maybe next year we will put together the first all-women team at the MDC3 college level!

Two Scholars, Nathan Cline (Y1) and Rachel Cohen (Y2), sat on a panel moderated by Dr. Hrabowski at the Cyber Maryland Conference on October 29 at the Baltimore Convention Center. Their session was titled, "Developing the Next Generation of Cyber Warriors."

Grace Hopper Celebration

Fourteen students and Information Systems faculty member, Dr. Amy Hurst, attended the Grace Hopper Celebration of Women in Computing in Phoenix in October. Grace Hopper is the world's largest gathering of women technologists. UMBC is one of 15 universities nationwide participating in a project called BRAID, which provides funding to support sending students to Grace Hopper and other activities aimed at increasing the diversity of computing majors at each institution.

Sofia Nasafi, Freshman, CWIT Affiliate — The most important thing I gained from attending the GHC was an outlook into the broader world of technology and the active women in this field. I had no idea there are so many women in the computing field, let alone in so many in positions of power and leadership. I had heard of the importance of technology and the weight of a STEM degree, but I never really understood it until GHC. I have more motivation and commitment to the field now than ever before, and I have the resources and networks to pursue it with more direction.

Beatrice Garcia (C11) - There were a lot of networking opportunities. I learned a lot about women in computing and ways we can fix the gender gap problem.

Graduating Seniors

Jessica Izumi (center), Chemical Engineering, will move to New Orleans in January to work for Dow.

Marie Wagner (left), Computer Science, will move to the San Francisco area in February to work as a software engineer for TellApart, a 70-person startup that does predictive marketing and data analytics.

Scholars Serving...

Kourtney Rutkowski (C12)- This semester I was in charge of the CWIT plot in the Garden. It's going great and we will be accepting more members to help tend the plot in the Spring! I was an Eco-Ambassador on campus this semester and have loved being able to help spread awareness and sponsor initiatives involving sustainability on campus.

Sami Turskey (Y2)- I served at ToolBank in downtown Baltimore, which is an organization that allows non-profits and other groups in the community to rent tools like saws, wheelbarrows, and tables for cheap. Usually we just help out with whatever is needed at the time. This could be filling orders, putting supplies away, cleaning tools, or painting new tools with their logo.

Caroline Kery (C13)- I have been volunteering with the Refugee Youth Project through the Shriver Center. I have found it an interesting experience, and have learned a lot about working with children.

Nicole Racine (C11)- Through the Shriver Center, I help conduct pool physical therapy for patients with MS. This is an awesome experience because I have learned so much about others and the community I live in, while also being a help to those I serve.

Savannah Steinly (C13)- I am currently a member of the UMBC Garden's Design Team, for which I aid in the development and implementation of ideas within the garden space on campus. On weekends earlier in the semester, I allotted part of my day to volunteering to construct this space. I helped to build the plots, mix and transfer the soil, and put together a tool shed.

Holly Johnson (C11)- I got to help fabricate a wheelchair ramp earlier in the semester as a continuation of a project from my freshman statics class. It was a fun hands-on experience and it was nice to help out a family in a direct way. I also helped out at the Samaritan Woman site with Tau Beta Pi. We spent a few hours helping with yard work and cleaning up around the farm.
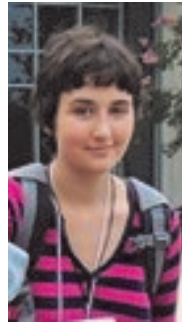
Michael Brown (T1)- I'm a member of the Engineers without Borders chapter. This past Fall, we were given our final permissions to travel to Kenya this winter to implement our clean water project. I will travel in January with a small group of students and faculty from UMBC to the village of Isongo, in western Kenya. While there, we plan to construct a bore hole type well and hand pump for the community, that will replace their current drinking water source (ground water that tested positive for several bacterial contaminants).

Hannah Aris (C13)- I volunteer with the Patapsco Heritage Greenway, and one Saturday, I was able to walk to a nearby Community College and remove invasive ivy from trees on its campus. It was a great experience and I was able to meet a lot of wonderful and kind people who also care about protecting and helping make the environment and nature healthy and thriving.

Alumni Updates

BEST of CWIT: Building Excellence Through Scholarships in Technology

By Crystal Diaz, CWIT Assistant Director

On October 20th, CWIT hosted 46 high school senior girls interested in engineering and computing majors at our first annual BEST of CWIT recruiting event. The prospective students who attended BEST of CWIT represented about 40 different high schools from several states. This event highlighted both the CWIT and Cyber Scholars Programs and allowed these high school senior girls to meaningfully engage with faculty, staff and current students. A committee of 18 scholars helped plan and implement BEST of CWIT and prospective students were able to meet even more scholars during the event. We look forward to continuing to diversify our CWIT community and help recruit more women in engineering and computing!

Celestine Wong (C13) - Helping out with BEST of CWIT was really fun. It really revealed to me how much pride I take in calling myself a CWIT Scholar.
Scott Bohon (Y2) - This event was a unique, honest depiction of the CWIT community and all it has to offer, particularly because it was such a student-driven effort. I would want others to know that the student community is the BEST of CWIT.
Lindsay Zetlmeisl (Y2) - I loved meeting all the aspiring female STEM majors and telling them about CWIT. It made me feel like I was really a part of accomplishing our mission.

Fall Highlights

T-SITE Update

By: Dr. Susan Martin, CWIT Associate Director

CWIT currently serves 16 transfer students, majoring in engineering and computer science, from Maryland community colleges. The T-SITE scholars program is funded through an S-STEM grant from the National Science Foundation ((DUE-1154300). Over the 5 years of the grant, the T-SITE program will provide scholarships and support services for a total of 30 academically talented, but financially needy transfer students, with a focus on women and other underrepresented groups in engineering and computing. Since the start of the project in March of 2012, 19 scholars have been selected and served as part of the CWIT Scholar community. One final cohort of 9 scholars will be selected for Fall 2015. Application materials are due March 15, 2015 and are available on the CWIT Website, cwit.umbc.edu/tsite.

T-SITEs are an impressive, diverse and successful group. Nearly 70% of scholars are female or African American. T-SITEs average three years (5.8 semesters) to graduation and have a 3.42 cumulative GPA. Eighty-five percent of the T-SITEs have participated in an internship, co-op or research experience. In May 2015, Kabish Shah, who transferred from CCBC and majored in Mechanical Engineering, was the program's first graduate and is employed by Whiting Turner as a construction engineer. Three more T-SITES will be graduating in May 2015.

The lessons learned from the T-SITE program have been actively shared as part of a working group of the STEM Transfer Student Success Initiative, T-STEM, stemtransfer.org, that is developing online content to assist new transfer students before and after they transfer to UMBC. T-STEM is an innovative multi-institutional collaboration funded by the Bill & Melinda Gates Foundation to support successful transition to the University of Maryland, Baltimore County by students from Anne Arundel Community College, The Community College of Baltimore County, Howard Community College and Montgomery College.

Fall Career Networking Event

In October, professionals from JHU/APL, GE Aviation, Northrop Grumman, Chesapeake NetCraftsmen, NSA, Orbis Technologies, ClearEdge IT Solutions, Tenable Network Security, Praxis Engineering, BAE Systems, Bureau of Labor Statistics, Leidos, U.S. Navy, and the Securities and Exchange Commission visited campus to help students improve their networking skills through interacting in small groups and then providing feedback and advice.

Grace Tarnosky (C13)- The Fall WIT event pushed me out of my comfort zone, but I found it very useful to be able to talk with professionals without the pressure of being in a real career setting. The industry members were all very patient and gave us honest feedback on what we were good at and what we needed to work on. I learned about appropriate attire for a networking event, how to introduce oneself to a potential employer, ways to make conversation, and other useful skills.

Michael Byers (T3)- The experience allowed us to practice a formal skill in a less formal setting. This helped to ease nerves and receive solid, honest feedback. Some of the best feedback I got was to show off who you are while still remaining humble and keeping your character.

Katrice St. Rose (Y1)- Our personal and professional lives are increasingly impacted by the relationships that we build and maintain so this was a really good opportunity to network and get advice on how to improve.

CWIT Living-Learning Community

By: Crystal Diaz, CWIT Assistant Director

This Fall, the CWIT Living Learning Community moved into its new space on the first floor of Chesapeake Residence Hall. We are excited to say that we now have the largest LLC on campus because we expanded to include 48 students. We also welcomed Erika Heffernan, our new Resident Assistant, to the CWIT family. Some highlights from the semester include the monthly Sunday Night Dinners, movie nights, miniature golf, visiting a corn maze and more! We look forward to continuing to develop our new community this Spring!

Jacob Riehl (C13) - The summer events (especially the retreat) had me already decently acquainted with some of the other students, and I immediately had the feeling that our community was as much a family as the one I was moving away from. I couldn't have asked for a more comfortable first semester.

Katie Swanson (Y2) - Returning to the CWIT LLC has had a huge impact on my involvement with the new freshmen. Serving as a mentor to many of them has been a highlight of my semester.

Sophia Haire (C12) - The CWIT-LLC in Chesapeake is so awesome! I love how the community is so close-knit and supportive and that you can always find someone to share a burden or a smile with.

Sara Masoudi (C13) - The CWIT LLC has been the best part about college so far. It allows us to become so much closer and we've really become a family. That kind of support is really what CWIT is about.

Connecting with Industry Professionals

By Cindy Greenwood, CWIT Assistant Director

CWIT thanks this fall's industry mentors! - This fall, a record 31 Scholars (14 CWIT, 12 Cyber, and 5 T-SITE) were matched with industry mentors from Northrop Grumman Corporation, Harris Corporation, T. Rowe Price, NSA, Orbis Technologies, L-3 Communications, Chesapeake NetCraftsmen, Textron Systems, GE Aviation-Middle River Aircraft Systems, ClearEdge IT Solutions, Securities and Exchange Commission, U.S. Navy, Johns Hopkins University Applied Physics Lab, U.S. Nuclear Regulatory Commission, and BAE Systems. Several mentors attended at least one session of our practicum class, where they engaged in small group discussions about career paths, work values, and corporate cultures with the scholars.

When asked about their experiences with industry mentoring, Scholars said:

April Wasserleben (T2)-I think the industry mentoring practicum will have a lasting impact. I tend to focus all my time on school, because it is a tangible goal. The practicum helped me to realize that I need to focus my efforts on life after school.

Nicole Racine (C11)- I learned how to analyze my strengths in a new way, using them to choose my career path. Because of the Industry Mentoring Practicum, I was able to decide what I want to do with my life!!!

Kat Pfeiffer (Y2)- I got paired with an awesome mentor who has given me so much great advice on how to reach my potential.

Thank you also to the professionals who spoke to this fall's Cyber Practicum class!

Each Friday during the semester, professionals representing various companies and agencies (and even UMBC) volunteered their time to talk with approximately 30 Cyber Scholars & Affiliates about a variety of topics within the realm of cybersecurity. Speakers represented the Women's Society of Cyberjutsu, U.S. Army Research Lab, TCecure, The Pentagon/Secretary of Defense, Northrop Grumman Corporation, the Department of Homeland Security, and more. For the second consecutive semester, T. Rowe Price also facilitated a tabletop exercise, giving students a simulated experience of working with others as a "red team" or "blue team."

In addition to those who visited campus, BAE Systems hosted the Cyber Practicum students in November in Annapolis Junction. Several BAE Systems employees shared their expertise with the students through presentations, facility tours, and a networking lunch.

CWIT Contributes to Research

By: Dr. Susan Martin, CWIT Associate Director

Imagine new freshmen working and learning together on small teams to create and implement substantial IT deliverables. This is happening at UMBC as part of an NSF TUES project, *Transforming the Freshmen Experience of Computing Majors* (DUE-1140589). Dr. Penny Rheingans, (CWIT and CSEE), leads the project team along with three coPIs -Dr. Susan Martin (CWIT), Dr. Carolyn Seaman (IS), and Dr. Marie desJardins (CSEE). Since August 2012, the team has designed and implemented a new first-year course, COMP101, for new freshmen in computing majors. The course includes an overview of computing disciplines, key technical skills, a group design and implementation experience, and academic and professional skills development. The goal of the course is to increase retention and graduation rates of computing majors, with a focus on women and other underrepresented groups. COMP101 is a 4-credit course taught by a team of faculty, staff, and peer instructors. Students work in teams to design, demo, evaluate, and present their *The Semester Game*. This is a simulation game in which players make choices about how to allocate time to academics, work and leisure activities and the game calculates the outcomes of those choices in terms of GPA, happiness and wealth. The research team is currently analyzing data collected from students who took COMP101 during the fall 2012, 2013, and 2014. Some preliminary analyses show that students in COMP101 are less likely to switch out of computing majors in the first year. Students also report that the course helped them to more clearly understand the breadth of career options available to them as graduates of UMBC's four computing majors.

Thanks For Your Support!

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