GRACE HOPPER CELEBRATION

In early October, eleven people from Western Washington University attended the Grace Hopper Celebration of Women in Computing (GHC) in Houston, Texas. We were fortunate to be part of the group that attended. As a conference for women computer scientists, by women computer scientists, the lessons we learned and memories we made at GHC were invaluable to our academic and professional development.

With a record breaking number of 12,000 attendees this year, GHC is the largest gathering of female technologists in the world. Including the two of us, there were seven current students, two professors, and two recent alumni from WWU who attended the conference. The conference was structured around a combination of technical talks and career sessions. Each day, we heard from several amazing keynote speakers such as Clara Shih, CEO and Founder of Hearsay Social, Manuela Veloso, a professor at Carnegie Mellon who is doing incredible research with autonomous robots, Megan Smith, the Chief Technology Officer for the US, along with many more. In addition to the keynote, there were countless talks and workshops about almost any topic you could want to learn about. GHC also has one of the largest technical poster sessions in the US, presenting a great opportunity for students to present their research to experts and receive feedback from attendees. One of the most mind-boggling parts of the whole trip was the massive career fair. Almost every tech company anyone could ever want to work for was there, and you could walk right up and talk to any of them! We all took home way more swag from the career fair than we could ever know what to do with. These were all great opportunities to hear about what is happening in the tech world and the possibilities for our futures.

Once we returned from GHC, we sat on a panel that was open to all departments and talked about our experience and how students might be able to attend in the future. The great thing about GHC is that there are numerous scholarships that help defray the cost of attending. Another way to attend is through a scholarship that the WWU Association for (Continue on 6)
Greetings from Bellingham! This year we welcome three new tenure-track faculty to our department: Moushumi Sharmin, Filip Jagodzinski, and Shameem Ahmed. Read more about each of them later in this newsletter and you’ll see why we’re so excited to have them join the department.

We will be doing some faculty recruiting again this year in the area of cybersecurity. These new faculty will help us deliver the BS degree in Computer and Information Systems Security that we started offering last year as a 2+2 program with Whatcom Community College. Professor David Bover has been working with new community colleges to help them offer the “2+” part of the program and new funding from the state is enabling us to offer the “+2” part of the program at Western’s facility at Olympic College.

As far as our BS in Computer Science, we have hired six new tenure-track faculty over the last three years, while the number of graduates has increased from an average of 45 per year to about 130 graduates this year and even more next year. We’re continuing to explore the possibility of hiring even more faculty to keep up with the student interest. I want to emphasize that the state has been very supportive of us growing our department because our alumni are so successful. Thanks and keep up the good work.

The most breaking news that I wanted to share with you is that we were accepted into NCWIT’s (National Center for Women in Information Technology) Pacesetters Program. This is a national program that is focused on improving the representation of women in computer science. As you know, we have had many efforts on this front over the past few years such as a large NSF S-STEM grant and an active women in computing club, but the Pacesetters program should help us achieve even more. Pacesetters will connect us with academic and industry partners across the country who are equally committed to this goal. I am so excited to be part of this program and I promise to keep you updated as things progress.

Finally, we must bid adieu to Dr. Martin Granier who is retiring. Martin has been a great colleague who has contributed so much to the department over the years. Perhaps most notable to you, dear reader, is that he has been the driving force behind this newsletter since I’ve been at Western. We look forward to receiving his postcards from exotic locales while we’re scrambling to put together the next newsletter!

Until next time,

Perry

Congratulations, Dr. Hutchinson!

Kathryn McClintic, ACM president, hands the Professor of the Year award to Dr. Brian Hutchinson.
Before joining the faculty at WWU, Dr. Filip Jagodzinski was a faculty member at Central Washington University. His research interests primarily focus on interdisciplinary work with computer science, biology, as well as chemistry. More specifically, his work focuses on computational biology, big data, and integrated information systems. He is currently working with students from the WWU Computer Science Department as well as students from other schools on various projects. Research opportunities with Dr. Jagodzinski are open to students of all skill levels. He is currently teaching CSCI 141 Computer Programming I and CSCI 322 Principles of Concurrent Programming, but if you are interested in the same interdisciplinary work as Dr. Jagodzinski, be sure to take his class on Bioinformatics (CSCI474) in the Spring! Outside of work, Dr. Jagodzinski’s hobbies include not doing computational biology, or integrated information systems, and spending time outdoors, cooking and traveling. He also spends his free time with his German Shepherd, Emma. More information about Dr. Jagodzinski, his work and contact information can be found on his faculty web page.

MOUSHUMI SHARMIN

Dr. Moushumi Sharmin earned her Ph.D. at the University of Illinois at Urbana-Champaign. Before joining the faculty at WWU, Dr. Sharmin was a Research Assistant professor at the University of Memphis. Her research primarily focuses on human-computer interaction, information visualization, mobile health, and privacy. Her current projects include the development and research of stress management technology that can help a user detect why, what, when and how frequently stressful building events occur and what can be done to help individuals relieve that stress resulting from everyday activities. Another of her projects is trying to find a way to enhance the privacy features on Facebook and working to understand what can be done to help users understand when their information is at risk. Dr. Sharmin has research positions available for those students of all levels who are interested, and these positions are available for students of all levels. Outside of work, Dr. Sharmin’s hobbies include traveling, watching or reading thrillers, listening to music, relaxing outdoors and spending time with her toddler. More information regarding Dr. Sharmin and her work can be found on her faculty web page.

SHAMEEM AHMED

Dr. Shameem Ahmed earned his Ph.D. at the University of Illinois at Urbana-Champaign. His research focuses are on human-centered computing, mobile based health informatics, and information and communication technology for development. Dr. Ahmed puts a very strong emphasis on helping others with his research, especially those who need it the most and would not normally be able to get help. He describes his work methodology as working from the bottom up. In other words, he communicates with the people he is helping so he can better understand the root of their problems in order to find the best solution. Dr. Ahmed has research positions available and is looking for like-minded students who are interested in his field of work and grassroots approach. He is open to collaborating. His research is available to students of all levels. His hobbies include spending time with his son, traveling, reading books, and watching YouTube videos. More information regarding Dr. Ahmed and his work can be found on his faculty web page.
The idea of analyzing one's behavior with a pointing device, such as a mouse or touchpad, has been gaining a lot of attention in the past decade. One research project underway in the Computer Science Department uses eye tracking and mouse tracking techniques for user authentication. Peoples' eyes move differently when looking at a screen, and graduate students working in this research use eye and mouse behavior to identify a user. “It works like using a fingerprint to login”, explains Hongwei Lu, a graduate student working with Dr. Yudong Liu. “For example, we could let a user login by simply selecting several buttons on the computer screen. Our program detects the way the user moves his or her eyes and the mouse. This information can be used to identify users.” In the long run, it is hoped that users will be able to log into their accounts by simply selecting buttons without typing their usernames and passwords. The only hardware needed is a good quality camera which tracks the user's eye movement. “In order to make the program work, first, we need to train it”, Hongwei explains.

In other words, the program needs to collect eye and mouse movement data from different users. Of course, the program needs to keep track of which data belongs to which user. When the program has learned the information needed, it will be able to identify and authenticate users. In brief, when a user tries to login, the program collects eye and mouse movement from that user. Then the program looks for the patterns it has previously learned from all users. If the data matches a user, the user is authorized to login, otherwise the login will fail. Other students involved in that research include Leon Hou and Jamison Rose. “It’s fascinating”, says Jamison Rose, who recently joined the project. “Using modern techniques, it is amazing what patterns a computer can learn just from looking at a collection of data.”
During his sabbatical over the past year, Dr. Phil Nelson spent his time working with the super computer company Cray, Inc. in Seattle. Since its foundation in the 1970’s by Seymour Cray, “the father of super-computing”, the Cray Super Computer group has created numerous versions of their super computers, starting with the Cray-1. Dr. Nelson’s work primarily focused on Cray’s parallel computing programming language known as “Chapel”. When working with Chapel, it is not always clear what is happening in terms of task distribution, load and communication. Dr. Nelson’s work alleviated this challenge by offering a way to visualize the whole process.

Dr. Nelson developed ‘chplvis’ as a tool to help Chapel’s programmers to visualize their program’s tasks and communication between locales.

Chplvis is very flexible in the sense that a programmer may only want to investigate a portion of their program. Chplvis offers a look into a Chapel program’s tasks, CPU usage, clock speed, concurrency communication count and size between locales. In a programming language like Chapel, that which was created for its excellent parallel computing, this information is very useful for a programmer to ensure that their code is as efficient as possible.

More information about the Chapel language, including examples of chplvis, can be found at chapel.cray.com.
Women in Computing was able to provide to fully cover the costs to attend GHC for two students from Western. This scholarship was created through the compassion and dedication of Andrea Frost, a graduate student at WWU, and Kelly Lyon, a recent graduate of WWU. Andrea and Kelly were the first students to attend GHC from Western, and attended this year, as well. Attending the conference was a life-changing experience for both of them, and they wanted other students to be able to attend as well.

We are so grateful to Kelly and Andrea for the time and effort that they put into this project to make sure that we were able to experience GHC for ourselves! A large portion of these funds were raised through the sales of the t-shirt that we are all wearing in the group photo. If you would like to purchase one (or ten) of these awesome shirts to support student scholarships to GHC 2016 and beyond, the link is below: www.wwu.edu/emarket/gracehopper

Attending GHC was an amazing experience, and the lessons we learned, memories we gained, and connections we made will stay with us for the rest of our lives.

*Article written by students Ella Ordona and Gracie Ermi*

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**NESSIS**

On September 26th, the Western Washington University Computer Science Department was represented at the New England Symposium on Statistics in Sports, or NESSIS. Faculty Brian Hutchinson, undergraduate students Sam Kaplan and Jake Moorhead, and WWU alumn Kyle Andelin traveled to Boston to present their research. The symposium, which was held at the Harvard University Science Center, consisted of multiple presentations about techniques and problems in the field of statistical sports modeling, along with a poster session. During the poster session, Moorhead, Kaplan, and Andelin each presented a poster displaying their research results, and discussed their findings with other attendees, which included representatives from ESPN, consultants of professional sports teams, and academic researchers and professors.
While Martin Granier’s childhood began in idyllic southern France, he had much traveling to do – flying aircraft from beautiful Tahiti and making his way throughout Spain, Canada and the US. Fortunately for us, Martin decided that Western Washington was a good place to settle and raise a family.

Martin received his BS from Middle Tennessee State University, an MS from the University of Louisiana and a Ph.D. from the University of Oregon. His areas of academic interest include web technologies, database and programming languages.

Martin joined the Computer Science Department at Western Washington University on a temporary appointment back in 1997 and since then has been an active, inspiring teacher, friend and colleague. In 2001, the CS Department, with support from Provost Andy Bodman, established the Internet Studies Center to oversee courses and certificates in web development to help WWU students leverage the value of their four-year and graduate degrees. Martin Granier was a natural choice as Director of ISC, a position that he has held since then.

Martin is remembered with much affection by generations of students for his enthusiasm, his friendly, helpful nature and his excellence and inspiration as a teacher, particularly with many references to somebody called “Bozo”. A major part of his role as ISC director has been in the arrangement and supervision of internships related to the ISC certificates. In this role, he has formed strong links with commercial and non-profit organizations to find real opportunities for ISC students to work directly with clients in the development of websites.

Sadly, after eighteen years at Western, Martin has decided to retire. He will be greatly missed by students, staff and faculty of the department, but his positive impact on the department will remain with us forever.
A NEW TRADITION: CS STUDY BREAK

Student success is enhanced if they feel a sense of belonging and community. We all need a chance to relax and connect, right? To make some positive memories and help students bond, we began to offer a CS Study Break event during “Dead Week” (the week before finals). Each of these events has a seasonal dash – with a treat of some kind, and an activity to encourage students to linger. For example, in Summer quarter we enjoyed ice cream cones and played Wiffle Ball on the Comm Lawn. At the Fall 2015 break, we offered hot cocoa and cookies and students made paper snowflakes. We will use these snowflakes to brighten the department all Winter. We hope to offer these events regularly and encourage our hardworking students to take a break and enjoy the season!