

# UNIVERSITY of WASHINGTON

Bi-Annual Newsletter Autumn 2014

> this issue Welcome **P.1** Alumni Spotlight **P.2** Faculty Spotlight **P.3** CIPCT at IPHIE 2014 **P.4** Recent Publications **P.5**

# CIPCT at IPHIE 2014 Master Class in Taiwan! (Page 4)

### events of interest

CIPCT Annual Mtg & Orientation September 12-13, Seattle, WA

Healthcare Information &

April 12-16, Chicago, IL

www.himssconference.org

(HIMSS) 2015

**Management Systems Society** 

### **CIPCT** Welcome Message - Dr. George Demiris

It is a great pleasure to welcome our new cohort and returning students to the new academic year as our CIPCT program continues to grow and evolve, addressing some of the national challenges and developments in health care and biomedical information technology. Emerging trends are calling for clinicians and data scien-

tists who can handle and process big data to generate new knowledge as well as a new generation of researchers and practitioners who can address the ethical, technical and clinical challenges of new ways to monitor and document health related information in the era of ubiquitous computing. Our coursework and other learning activities in the CIPCT program have



been updated to address these new realities and prepare for these unique skills required by the new health IT workforce. In this newsletter you can learn more about one of our faculty, Dr. Rebecca Hills, and one of our alumni, Stephen Kamau, and see updates from the program. Chris Tatro is reporting on his experience participating in the International Partnership in Health Informatics Education (IPHIE) Master Class. IPHIE is a network of biomedical and health informatics programs (including the University of Washington, University of Utah, University of Minnesota and the University of Heidelberg, University of Amsterdam, Tirol University and the Medical School of Taipei University) fostering student and faculty collaboration in the field of health infor-

matics. We are looking forward to working with you all this coming academic year!

# ODerin

# Alumni Spotlight A brief look at some of our recent graduates!





#### <u> Stephen Kamau — Tacoma, WA</u>

Q: Please give a brief overview of your current role in the health care informatics field.

I spend most of my time researching efforts focused on achieving Meaningful Use (MU). By Meaningful Use, I am referring to the federal government program that offers financial incentives to those Eligible Providers (both hospitals and professionals) that use a Certified Electronic Health Record Technology (CEHRT) to improve patient outcomes. I am also tasked with evaluating and selecting additional technology that can be paired with our CEHRT to improve interoperability and determining end-user requirements and optimizations of our current Electronic Health Record (EHR). I am also slowly trying to dip my hands into the project management side of informatics.

Q: From a student perspective, how would you describe the CIPCT program?

As a former student, I truly appreciate the high quality of training in both qualitative and quantitative methods in research. I also enjoyed the different real-life simulated projects that gave me an understanding of what to expect after graduation. Online learning was new to me but I can now see the value since some of my interactions with leadership takes place through online platforms.

Q: How did the CIPCT program prepare you for your current position?

From a clinical standpoint, the CIPCT program at UW opened doors for me to experience a high level of interaction through group collaborations with fellow students and faculty professors, and learn how to become an innovative leader ready to help contribute to the field of informatics. The research skills I learned through the program helped me realize the value of IT in healthcare, which made my transition to the informatics environment seamless; I fit in immediately. The CIPCT program also offered me a rare opportunity to intern at a reputable HIT consulting firm on a \$400M revenue project that boosted my research and analytical skills significantly. Immediately after graduation I took on a challenge and successfully led a small community hospital in rural Washington through its first phase of Meaningful Use in less than 4 months from implementation to successful attestation. The skills I attained through the program proved to be extremely vital and they continue to be even more essential now in my current role as a clinical Informaticist of a much bigger organization.

#### Q: What advice would you offer to students entering the program this year?

Let me start by saying that graduate school is a full-time job. Don't let anyone try to convince you otherwise. What I can tell those joining the program this year, especially those coming from a clinical background, is what I wish someone had told me prior to joining the program: Try to stay one week ahead of course readings and assignments... Read, research and read some more! This will allow you to stay on top of your work and give you leeway for any unexpected extra work involving research. Treat graduate school like a nine-to-five job as much as you can but also find an avenue to take some of that stress off. My outlet was photography and blogging; I found a health informatics blog that not only contributed to my knowledge of informatics but also served as a networking platform. Find what works for you, go to the museum or go biking... Whatever you can do to take you mind off school work for a few hours a week will be worth it in the end. I did not put off my family for schoolwork, and I also did not put off schoolwork for my family—I found a balance. Make connections while in the program, as life sometimes deals us with situations we cannot avoid, and you will need these friends to get you up to speed if you miss any school-related work. One last piece of advice: the textbooks I used as a graduate student in the program are actually still in my office and are an important resource in my daily work. I just wish I spent more time reading these books while in school; they are a wealth of knowledge, especially for a relatively new discipline such as clinical informatics and patient-centered technologies. If I had to do this again, I would make sure I identified and researched areas for my thesis/project within the first year of the program, and at least have my name as a co-author in 1-2 scientific research papers published before graduations. I realized faculty was extremely willing to assist with this but I had to make the initiative—now you know!

#### Q: Where do you see the field of clinical informatics heading in the next 5 years?

Like one of my former instructors said, we have to be "technorealists". With the introduction of electronic health systems and the push for additional infrastructure, the field of informatics is already facing numerous challenges that come with integrating nursing science and computer science and finding a fair balance. The frustrations are already starting to build with the federal government mandate to have healthcare organizations put in place a certified electronic health system by 2014, and sadly the current generation of clinicians is not adapting well to this dynamic environment and organizational leaders are having a hard time meeting these requirements. There is a gap that exists. A gap that calls for well-trained Informaticists, but the demand is far outpacing their availability. For those looking to transform the healthcare industry through information science, the underlying science and practice of health are in continuous transformation, and clinical informatics as a discipline is strongly affected by these changes but also in a position to be a key, active contributor in the coming years.

# A bit about our faculty

### Rebecca A. Hills, PhD

I decided to combine my interest in public health with technical experience when I was an employee of the Colorado School of Public Health in Denver. At CU I received my MSPH and worked for several years in a design and development group designing and building tools for public health and clinical research applications. From there I pursued formal training in Biomedical and Health Informatics here at the University of Washington. Today, I'm teaching for the CIPCT program and doing research through the Northwest Center for Public Health Practice - a part of the University of Washington's School of Public Health.

I truly enjoy teaching, and my current role in the CIPCT program along with the work I do on a few really interesting research projects is really a dream job for me! Outside of teaching, I focus most of my energy on very practice-oriented work related to public health and the information needs of public health practitioners. I'm particularly interested in connecting public health systems with clinical systems to make sure those with a focus on the population view in the field of public health have the information and data they need to do their work.



### Q: What courses do you typically teach in the CIPCT program?

A: In past years I've taught Project Management and Scholarly Proposal Development. I enjoy teaching these two courses because they are very different. Project Management is a very practical look at the inner workings of IT projects and it gives students access to lots of tools that will inevitably come in handy at some point in their careers. Proposal Design and Development is a fun way to get to know students and their research and scholarly project interests. It is really satisfying to see student projects evolve from an idea into a full blown proposal in just a quarter! In 2015, I'll also teach Scholarly Inquiry for Nursing Practice and I think this will be a great opportunity to teach students about methods right before they start on the scholarly project proposal.

### <u>Q: Would you tell us a little about your research interests?</u>

A: The project I'm working on the most right now is one out of Indiana. I am helping a colleague here at the UW, and alongside investigators at Indiana University we are looking into how clinicians and public health practitioners perceive and interact with a new system to help with automation of notifiable condition reporting (supporting a core function of public health). In general I'm interested in information systems that support population views for use by clinicians, administrators and other public health professionals.

# <u>Q: How do you see information technology impacting the health care 'world' in the near future?</u>

A: As someone with a particular interest in public health, I'm excited to see how expanding coverage of

EHRs and better connectedness of provider organizations can improve the health of our population. I think that very soon patients will notice big differences in the way care is provided, how they receive reminders (many patients have already seen this), and the way public health officials can target resources. I also expect that soon we will see providers and their organizations making use of valuable population level views of their patient data and therefore improving their understanding of their patient populations and the care they provide.

# <u>Q</u>: What can our students do to best position themselves for a career in informatics?

A: Two things: networking and getting involved. Networking is easier now that we have tools like LinkedIn, but going to an industry meeting and talking with people face-to-face is always going to give you more bang for your buck. If you don't have a job, reach out and talk to people and find out about who is hiring, or, if possible, volunteer at the place you'd like to work. If you do have a job, volunteer to do a little extra in your current role (training, acting as an advocate or a super -user), try to demonstrate your skills and interests and take advantage of opportunities that present themselves.

# <u>Q: What advice would you give to a student enrolling in CIPCT this autumn?</u>

A: Practical advice: plan ahead. Think about scholarly project topics as you are taking classes during your first few quarters. The earlier you start thinking about an idea, the easier it will be for you when you start writing the proposal.



# **UW CIPCT at IPHIE 2014 Master Class**

Taipei Medical University, Taipei, Taiwan—July 21-25, 2014

This July, CIPCT Program Director Dr. George Demiris and CIPCT Student Chris Tatro participated in the International Partnership for Health Informatics Education (IPHIE) Master Class at the Taipei Medical University in Taiwan. IPHIE is an international partnership of seven Universities seeking to promote education through international collaboration of graduate and undergraduate training programs in Medical and Health Informatics.

Students and faculty from each of the universities gathered together for five days for academic conferences, courses, lectures and seminars to promote exchange of ideas and explore current topics in health informatics. Topics for 2014 included:

- Cloud Computing for Health-care: Enhancing the current cloud computing infrastructure in order to integrate massive heterogeneous health and biomedical data to provide a robust and user-friendly platform for clinical studies.
- Big Data Analysis for Biomedical Research: Improving the ability of researchers in processing • and analyzing massive health and biomedical data.
- Establishing a satisfactory research environment, seeking to combine technology with hu-. man knowledge and promote educational innovations in health and biomedical informatics.
- Providing a mechanism for cooperation between international governments, industries and academic facilities.

Chris Tatro, Autumn 2013 Cohort, gave this feedback about the experience....

The IPHIE Master Class is part conference, part symposium, part international collaborative working group. It is held every other year among IPHIE schools; luckily for us, Taipei Medical University's turn to host was this year. The hosts were extremely gracious and hospitable; plus, we got to travel to Asia!

The week was attended by approximately 60 students (mostly PhDs in biomedical informatics) and faculty. Monday began with student presentations on their various projects and focuses; the talks were varied; overall an interesting view on what a lot of smart people are working on across the country and around the world.

> On Monday afternoon and throughout the week, various faculty from the participating schools spoke, and some members of the National Health Service in Taiwan talked about their programs and the healthcare system in Taiwan, particularly as relates to informatics. We also received a tour of the Taipei Medical Center and the Taipei Medical University.

The theme of the week was big data; many of the talks focused on this topic, and our working group project was centered on the theme. The working group project is a highlight of the Master Class. Students were divided

into groups of 5-6 participants, and from Tuesday through Thursday, spent several hours per day completing a project to be presented on Friday morning.

The small working groups were given access to a real data set from Taiwan: their national cancer patient database. The directive was simply to "have at it"; like the tenets of Big Data, we got the chance to sift through a large data set to see what we could find.

Before the final working group presentations on Friday, the hosts gave us plenty of chances to experience Taipei and Taiwan. We were treated to dinner at Taiwan's version of Planet Hollywood - Mr. J's, and got to eat local shabu-shabu and tour the night markets, which are a combination of street fair, carnival, and flea market. Many interesting delicacies are on display at the night markets. Particularly squid. One can have squid any one of 100 ways; one of the favorite methods is whole fried squid-on-a-stick.

On Tuesday night, we were unexpectedly hit straight-on by Typhoon Matmo. Fortunately, Taipei is on the leeward side



**International Partnership** for Health Informatics Education







# UW CIPCT at IPHIE 2014 Master Class (cont.)

#### Taipei Medical University, Taipei, Taiwan—July 21-25, 2014

of the island's mountain range, so our experience was "only" 18 hours of heavy rain and winds topping out at about 80-90 MPH. Could have been worse; though overnight, inside a shaking/swaying hotel on the 13<sup>th</sup> floor (Taiwan has no superstitious fear of the number 13), it got a bit nerve-wracking. However, we can all now say we've experienced a typhoon.

Thursday was our day tour. We visited the Jhongshan presidential palace, built in the traditional Chinese style on a mountainside on top of a volcanic sulfuric vent. We then followed up a glorious ten-course lunch with a steep, humid hike up to top of Mt. Qixing in the Yangmingshan National Park. The views were worth the sweat. In the evening, we toured the Danshui recreation area, a riverside market and park on the other side of New Taipei and its fascinating modern architecture.

The week overall was a fascinating exposure to Taiwanese culture and the Taiwanese medical system. The people are warm and friendly, and the medical system is very well integrated, organized, and delivered. Every citizen has a healthcare card that serves as an identifier and insurance card. The entire country is on the same electronic health record system, even in the far rural reaches of the island.



Clinical Informatics & Patient-Centered Technologies



Most rewarding was the chance to meet and work with so many interesting people. I was able to interact with students and faculty

from Minnesota, Utah, Germany, Austria, Netherlands, Sweden, and Taiwan. Many of the attendees were PhD students in bioinformatics, so it was interesting to see what they are going through and working on. I hope as one of the older students, who was one of the few with a robust clinical background, I was able to teach them some new things as well.

Lastly, it was a blast to be able to spend time with the other UW students and faculty. Perhaps my most delightful discovery on the trip was Dr. Demiris' playful sense of humor. Many thanks to him and the CIPCT program for the opportunity of a lifetime!

For more information about IPHIE, please visit <u>http://www.iphie.org/</u>.

### **Recent Publications - 2014**

Key: Faculty names in **bold**; CIPCT student names in **bold italics** 

Albright DL, Oliver DP, Demiris G. Reaction to Caregiving by Hospice Caregivers Upon Enrollment. Am J Hosp Palliat Care. 2014 Apr 16.

- Berry DL, Hong F, Halpenny B, Partridge A, Fox E, Fann JR, **Wolpin S, Lober WB,** Bush N, Parvathaneni U, Amtmann D, Ford R. <u>The electronic</u> self report assessment and intervention for cancer: promoting patient verbal reporting of symptom and quality of life issues in a randomized controlled trial. *BMC Cancer*. 2014 Jul 12;14:513.
- Carroll LN, Au AP, Detwiler LT, Fu TC, Painter IS, Abernethy NF. Visualization and analytics tools for infectious disease epidemiology: A systematic review. J Biomed Inform. 2014 Apr 16.
- *Chung J*, Reeder B, Lazar A, Joe J, **Demiris G, Thompson HJ.** Exploring an informed decision-making framework using in-home sensors: older adults' perceptions. *Inform Prim Care*. 2014;21(2):73-7.
- Crane HM, Heckbert SR, Drozd DR, Budoff MJ, Delaney JA, Rodriguez C, Paramsothy P, **Lober WB**, et al. Lessons learned from the design and implementation of myocardial infarction adjudication tailored for HIV clinical cohorts. *Am J Epidemiol*. 2014 Apr 15;179(8):996-1005.
- Devine EB, Lee CJ, Overby CL, Abernethy N, McCune J, Smith JW, Tarczy-Hornoch P. <u>Usability evaluation of pharmacogenomics clinical decision support aids and clinical knowledge resources in a computerized provider order entry system: a mixed methods approach.</u> *Int J Med Inform.* 2014 Jul;83(7):473-83.
- Dorschner MO, Amendola LM, Shirts BH, Kiedrowski L, Salama J, Gordon AS, Fullerton SM, Tarczy-Hornoch P, Byers PH, Jarvik GP. <u>Refining</u> the structure and content of clinical genomic reports. *Am J Med Genet C Semin Med Genet*. 2014 Mar;166C(1):85-92.
- Flum DR, Alfonso-Cristancho R, Devine EB, Devlin A, Farrokhi E, **Tarczy-Hornoch P**, et al; <u>CERTAIN Collaborative. Implementation of a real</u> <u>-world" learning health care system: Washington State's Comparative Effectiveness Research Translation Network (CERTAIN)."</u> Surgery. 2014 May;155(5):860-6.
- Gallego CJ, Bennette CS, Heagerty P, Comstock B, Horike-Pyne M, Hisama F, Amendola LM, Bennett RL, Dorschner MO, **Tarczy-Hornoch P**, et al. Comparative effectiveness of next generation genomic sequencing for disease diagnosis: Design of a randomized controlled trial in patients with colorectal cancer/polyposis syndromes. *Contemp Clin Trials*. 2014 Jul 3;39(1):1-8.
- Gimbel S, Voss J, Rustagi A, Mercer MA, Zierler B, Gloyd S, Coutinho Mde J, Cuembelo Mde F, Sherr K. What does high and low have to do with it? Performance classification to identify health system factors associated with effective prevention of mother-to-child transmission of HIV delivery in Mozambique. J Int AIDS Soc. 2014;17:18828.

# **Recent Publications - 2014 (cont.)**

Key: Faculty names in **bold**; CIPCT student names in **bold italics** 

- Hall LW, **Zierler BK.** Interprofessional Education and Practice Guide No. 1; Developing faculty to effectively facilitate interprofessional education. J Interprof Care. 2014 Jul 14:1-5.
- Jaimes LM, **Thompson HJ**, Landis CA, Warms CA. <u>Nurses' Knowledge of Pain Management</u> <u>for Patients with Combat-Related Traumatic Brain Injuries on Rehabilitation Units.</u> *Rehabil Nurs.* 2014 Apr 7.
- Le T, Reeder B, *Chung J*, Thompson H, Demiris G. Design of smart home sensor visualizations for older adults. *Technol Health Care.* 2014 Jul 24.
- Lober WB, Reeder B, Painter I, Revere D, Goldov K, Bugni PF, McReynolds J, Olson DR. Technical Description of the Distribute Project: A Community-based Syndromic Surveillance System Implementation. Online J Public Health Inform. 2014;5(3):224.
- Oliver DP, Washington K, Kruse RL, Albright DL, Lewis A, **Demiris G.** <u>Hospice Family</u> <u>Members' Perceptions and Experiences With End-of-Life Care in the Nursing Home.</u> *J Am Med Dir Assoc.* 2014 Jul 10.
- Ostrander RE, **Thompson HJ, Demiris G.** Using targeted messaging to increase physical activity in older adults: a review. J Gerontol Nurs. 2014 Aug;40(9):36-48.
- Reeder B, Chung J, Le T, Thompson H, Demiris G. Assessing older adults' perceptions of sensor data and designing visual displays for ambient environments. An exploratory study. Methods Inf Med. 2014;53(3):152-9.
- **Thompson HJ,** Belza B, Baker M, Christianson P, Doorenbos A, Nguyen H. <u>Identifying</u> and evaluating electronic learning resources for use in adult-gerontology nurse practitioner <u>education</u>. J Prof Nurs. 2014 Mar-Apr;30(2):155-61.
- Van Eaton EG, Zatzick DF, Gallagher TH, Tarczy-Hornoch P, Rivara FP, Flum DR, Peterson R, Maier RV. <u>A nationwide survey of trauma center information technology leverage</u> <u>capacity for mental health comorbidity screening</u>. J Am Coll Surg. 2014 Sep;219(3):505-510.e1.
- Wittenberg-Lyles E, Demiris G, Oliver DP, Burchett M. Exploring aging-related stress among older spousal caregivers. J Gerontol Nurs. 2014 Aug;40(8):13-6.
- Wittenberg-Lyles E, Parker Oliver D, Demiris G, Swarz J, Rendo M. YouTube as a Tool for Pain Management With Informal Caregivers of Cancer Patients: A Systematic Review. J Pain Symptom Manage. 2014 Apr 30.
- Zierler BK. The gap between academia and practice: reflections from a nurse researcher. J Nurs Educ. 2014 Jun;53(6):303-4.

### 2014-15 CIPCT Calendar Highlights

<u>UW</u> <u>Academic Calendar</u>	<u>Instruction</u> <u>Begins</u>	<u>Quarter Ends  /</u> <u>Final Exams</u>
Autumn Quarter 2014	September 24	December 8-12
Winter Quarter 2015	January 5	March 13-20
Spring Quarter 2015	March 30	June 5-12

http://www.washington.edu/students/reg/1415cal.html

APPLICATION DEADLINE FOR AUTUMN 2015 ADMISSION: MAY 1, 2015

### **Connect with UW CIPCT!**



LinkedIn: "UW Clinical Informatics and Patient Centered Technologies CIPCT"



Facebook: "UW Clinical Informatics and Patient-Centered Technologies"



Twitter: "UW CIPCT: @cipct\_uw"



ient-Centered lechnolog

<u>cipct.uw.edu</u>

Email: uwcipct@uw.edu Toll-Free: 866-931-1687



