Student e-Newsletter

Chipping In

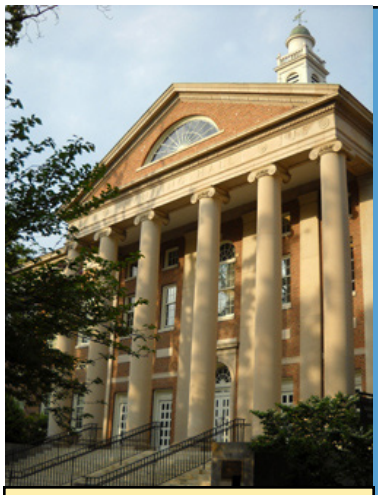
Issue 3

Spring 2014

In this issue:
-Introducing a new Master's degree in Health Informatics
- CHIP welcomes new faculty
- Congratulations to our graduates

CHIP Graduation, Orientation and Meet & Greet
January 17th, 3:30-5pm
Manning Hall, Rm 303
You are invited!

chip.unc.edu



CHIP is pleased to announce

The Professional Science Master's in Biomedical and Health Informatics*

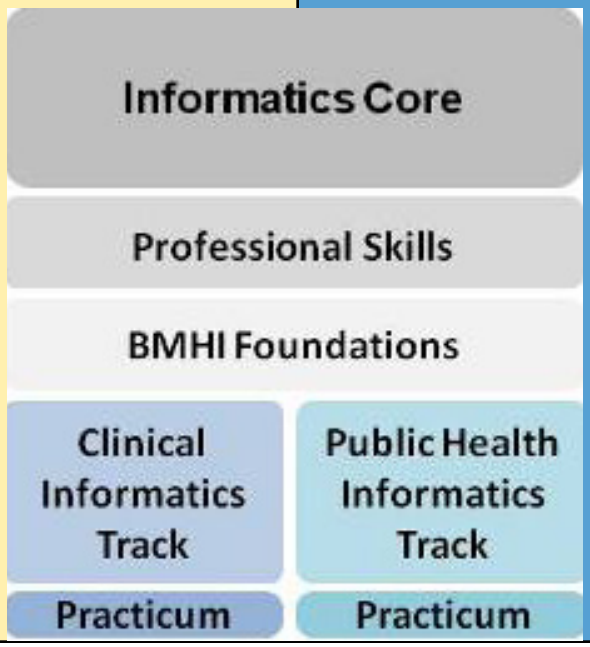
The PSM in BMHI is set to lauch in the Fall 2014 semester.
Application information to be released upon final approval.

35 credits

17 months of full time study
1 core
2 tracks

The Clinical Informatics Track is designed for students interested in working in a clinical care setting in offices of information systems and for physicians who are pursuing a certificate in Clinical Informatics.

The Public Health Informatics Track is designed for students with specific career interest in applications of information systems in population health and public health policy.



PSM in BMHI will prepare the next generation of health informatics leaders. Program graduates will gain knowledge and skills in:

- Management of large scale projects related to clinical and public health information systems
- Development and evaluation of health information systems that impact clinical decision making and health care quality
- Analysis and management of health data for improvement in clinical practice, biomedical research and public health services

This truly interdisciplinary program utilizes faculty and resources from several of UNC's top-ranked professional schools including the School of Information and Library Science, the Gillings School of Global Public Health, the School of Nursing, the School of Medicine, the Eshelman School of Pharmacy, and the School of Dentistry.

For more information on this degree please visit our website:

https://chip.unc.edu/psm-bmhi/

* pending final approval by the Board of Governors

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Implementing i2b2 as a Research Portal for NC TraCS

Robert Bradford

Providing researchers with the tools to complete their project goals is a great accomplishment. However, to provide an adequate, complete, and easy to use system is no easy task especially when it comes to medical data. The University of North Carolina Health Care System (UNCHCS) developed a valuable resource for storing clinical data; the Carolina Data Warehouse for Health (CDW-H). Since 2004, the CDW-H serves as a central repository for clinical, research and administrative data collected from within the UNCHCS. Through the North Carolina Translational and Clinical Sciences Institute (NC TraCS) researchers are able to obtain clinical data for retrospective studies as well as identify potential participants for clinical trials. As a result of the capabilities provided by a resource such as the CDW-H it is important to make the data available and useful to researchers. As a practicum project, we focused on providing a powerful yet easy to use interface for researchers to directly interact with.

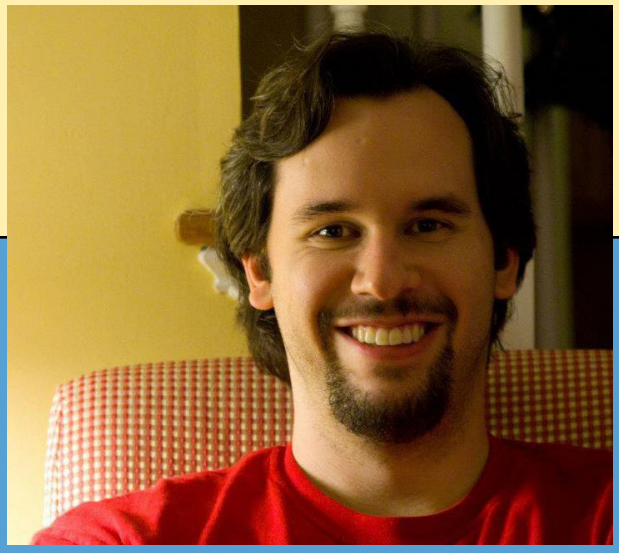
Informatics for Integrating Biology and the Bedside (i2b2) is an ontology-based object-oriented database system with a flexible database schema and a user-friendly web client interface. Since its inception, i2b2 has met wide international adoption amongst the CTSA network, academic health centers and industry leaders. The ease of use of the i2b2 web client made it a prime target to be incorporated into a query translation system called OpenFurther. Developed at the University of Utah, OpenFurther is an open source system that connects i2b2 to a federated query engine that allows us to combine and relate data from multiple data sources. In a typical implementation of i2b2, data must first be extracted and transformed into the data format utilized by i2b2's data repository cell. By attaching i2b2 to OpenFurther, the need to extract and transform data and insert it into i2b2 is removed. Instead, the OpenFurther engine handles the transformation of data in real time through a series of associations defined for each data source that information is dynamically retrieved from.

In conjunction with Ashraf Farrag, a fellow CHIP alumnus and member of NC TraCS whom set the stage for potential i2b2 work, we formulated a plan for a proof of concept practicum for connecting OpenFurther to the CDW-H. For an initial proof of concept, a single domain representing the patient demographic information in the CDW-H was successfully connected to OpenFurther. This process required a test environment that included a mimic of the CDW-H, a set of non-specific sample patient data, and ran the OpenFurther server. At the conclusion of the practicum, a user is able to login to the i2b2 web client, submit a query on the various demographic attributes of patients and retrieve a count of patients that satisfy the query. Achieving this connection demonstrates the ability to configure the engine to communicate with our local data source, the CDW-H. Additionally, it provides confidence in our ability to expand upon the information, such as clinical or administrative data, connected to the engine in the future.

Robert Bradford earned his Clinical Information Science Certificate in December 2013.
View his poster on the CHIP website at chip.unc.edu

Congratulations to our recent graduates who earned their Clinical Information Science certificates!

Spotlight on John Mark Bojanski



John Mark is receiving his certificate in Clinical Information Science this Friday at the CHIP graduation ceremony. He is also working towards finishing his Master of Science in Library Science in the near future. Prior to joining our program, John Mark spent three years working at Chapel Hill Pediatrics and Adolescents (CHPA) where he supervised the integration of their new patient portal with the EHR already used in their office. This allowed for greater communication between the providers and the patients, as well as their parents. While there he also helped start the CHPA Facebook page and worked on a number of projects related to children with special health care needs, a population dear to CHPA's heart.

Currently, John Mark is using what he learned in the certificate program to create a custom SQL database for the North Carolina Museum of Natural Sciences so they can better track the over 200 animals they use for educational programs.

Following graduation, John Mark is hoping to take his skillset to the Fellows Program run through North Carolina State University libraries. Alternatively, he knows that his CIS certificate will make him a more competitive candidate for jobs in health-related companies in RTP (such as GlaxoSmithKline, Blue Cross Blue Shield, or IntraHealth). Congratulations on earning your certificate John Mark!

Come see all the graduates receive their certificates this Friday in Manning.

Congratulations also go to:
Robert Bradford
Jayson Caracciolo
Nicci Gafinowitz
Sree Machiraju
Julia Marshall
Mike Owino
Nidhi Soni
Enobong Utin

CHIP welcomes Dr. David Gotz to its growing faculty

We are happy to welcome Dr. David Gotz as our newest faculty member. Dr. Gotz comes to us from New York where he worked at IBM in their T. J. Watson Research Center. While there, he developed new visual analytics technologies with applications to a wide range of fields including medical informatics. After nearly a decade with IBM he decided to return to UNC in order to work more closely with clinicians, researchers and health professionals, as well as to collaborate with "first-rate colleagues." Dr. Gotz is familiar with UNC from his days as a graduate student here. He earned both his Master's and Doctorate degrees in Computer Science here in Chapel Hill.

Dr. Gotz is interested in exploring new ways to combine data analysis, information visualization, and interactive user interfaces to help enable data-driven solutions to healthcare challenges. He will also be teaching in the School of Information and Library Science. Come meet him in person at the CHIP Meet & Greet this Friday.

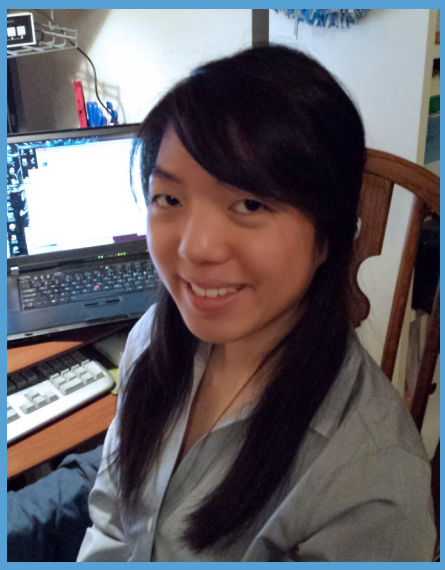
Come meet him in person at the CHIP event on 1/17/14.

Welcome Lauren Li, incoming CHIP student

Lauren is beginning in the Spring 2014 semester and comes to us from Alamance Regional Medical Center where she was a certified MRI technologist. She attended UNC as an undergraduate and graduated top of her class in the Radiologic Science Bachelor's Program. This is how she decribes her interest in joining CHIP:

"I chose UNC's CHIP program because UNC is an all-around excellent university with strong departments in both healthcare and in information/computer sciences. The CIS program looks like it provides a good basis from which one can branch out into several different areas of healthcare informatics. My primary goal with Health Informatics is to expand my skills in information and computer technology in a way that builds upon my healthcare interests and background. Subsequently, I would like to directly use those skills in a clinical position, for example working with a hospital's PACS (picture archiving and communication system) database, or pursue further education in information technology so I can contribute to the development and design of other healthcare-related applications."

Welcome to CHIP, Lauren!



Laruen enrolled for her first two CHIP courses in Spring 2014.

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Upcoming Events

1/17/14 - Friday - ***CHIP Graduation, Orientation, and Meet & Greet***
Manning Hall, Room 303, 3:30-5. For more information please e-mail the program coordinator at LarisaR@unc.edu

2/6/14 - Thursday - ***Public Health and Informatics Job and Internship Expo***
Michael Hooker Research Center Atrium in the Gillings School of Public Health, 12-3pm. To see a list of participating business please visit: bit.ly/2014PHFair

Save the Date:

10/24/14 - Friday - ***Health Informatics Career and Internship Fair/Symposium***
Held at the East Carolina Heart Institute from 10am-4pm. More information to follow.

Joint UNC/Duke Informatics Research Seminar Series:

1/15: Chuck Kesler, MBA, CISSP, CISM, PMP - "Cyber Security Trends in Healthcare: Threats, Regulations, and Best Practices"

1/22: UNC's Vincent N. Carrasco, MD - "Stress Induced Neurospatial Activation Patterns"

1/29: Timothy J. Mulrooney, PhD and Garrett Love, PhD - "Using Spatial Enabled Information to Analyze & Visualize Health Behaviors"

2/5: Lixia Yao, PhD - "A Decision Support Model for Pharmaceutical Research Prioritization"

2/12: Tony Cellucci, PhD, ABRP and Leigh W. Cellucci, PhD - "EMR Use in Psychology Clinics: Adoption, Current Status, and Future Directions"

2/19: Shelley Hwang, MD, MPH - "Breast Cancer Data Mining"

2/26: UNC's Timothy Jay Carney, PhD, MPH, MBA - "Meeting the Challenges of Smart and Connected Health: A Cancer Health Disparities Use-Case"

4/9: UNC's Richard Medlin, PhD - "Providing Better Point of Care Reference Material for Clinicians"

* Seminars are held in the Health Sciences Library, Room 328, on Wednesdays from 4-5pm.
* **To sign up to attend please contact LarisaR@unc.edu**
* To see the rest of the seminar schedule please visit: www.dchi.duke.edu/education/informatics-seminars

For comments and suggestions regarding news items, please contact:
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