

Chia-Fang (Christina) Chung

Assistant Professor
Informatics, School of Informatics, Computing, and Engineering
Indiana University Bloomington

cfchung@iu.edu
<http://cfchung.com>

Research Interests

Designing systems and services to support healthcare, wellness, and relationships
Personal Informatics, Behavior Change, Ubiquitous Computing, Computer-Supported Cooperative Work

Education

University of Washington, Seattle, USA 2012 - 2018
PhD, Human Centered Design & Engineering
Advisor: Sean Munson

National Taiwan University, Taipei, Taiwan
MBA, Information Management 2004 - 2006
Thesis: Design and Implementation of a Stateful High Speed Intrusion Detection System
Advisor: Yeali Sunny Sun

BBA, Information Management 2000 - 2004

Research Experience

University of Washington, Seattle 2012 - 2018
Graduate Research Assistant, Human Centered Design & Engineering 2013 - 2018
Supervisor: Sean Munson
Sharing lifelog data with healthcare providers and experts in clinical care (funded by AHRQ)
Adoption of blood pressure kiosks in clinical settings
TempFeel: Supporting remote relationships with temperature information sharing
Goal setting features in health and wellness applications

IBM T.J. Watson Research Center, Yorktown Heights, NY
Research Intern, Computational Health Behavior & Decision Science Autumn 2015
Supervisor: Catalina Danis
Integrating Population-based Patterns with Personal Routine to Re-engage Fitbit Use

Graduate Research Assistant, Human Centered Design & Engineering 2012 - 2013
Supervisor: Keith Butler and Mark Haselkorn
Design and evaluate the evidenced-based method for health information technology (funded by AHRQ)

IBM Research Collaboratory Taiwan 2009 - 2012
Care Coordination for Diabetes Management 2012
Supervisor: Sreeram Ramakrishnan and Henry Chang
Architected and designed in-market experiments and system architecture to facilitate chronic disease management inside and outside hospital and improve clinical outcome
Conducted user study, system flow/process analysis of 2 area hospitals (2000+ beds) and 1 clinic group (7 clinics and 3 supporting hospitals) as well as experiment design

Context-based Personal Wellness Management System 2010 - 2012
Supervisor: Raymund Lin and Sreeram Ramakrishnan
Architected and integrated 3-party coaching service, exercise prescription and monitoring system to provide context-based exercise guiding service.
Performed user centered system design and conducted In-market experiment.

Monitor as a Service: Highly scalable event processing service in the cloud 2010 - 2011
Supervisor: Liangzhao Zeng

Health Management Application Development and Deployment Framework 2009 - 2010
Supervisor: Liangzhao Zeng and Henry Chang

Refereed Journal Articles

- J5 **Inter-Rater Reliability of Provider Interpretations of Irritable Bowel Syndrome Food and Symptom Journals** 2017
Jasmine Zia, Chia-Fang Chung, Kaiyuan Xu, Yi Dong, Jeanette M. Schenk, Kevin Cain, Sean Munson, Margaret Heitkemper
Journal of Clinical Medicine;6(11):105
- J4 **Should you always have a backup? One vs. Two Goals in Games** 2017
Chia-Fang Chung and Sean A. Munson
International Journal of Human-Computer Studies;108:32-40
- J3 **The Feasibility, Usability, and Perceived Clinical Utility of Traditional Paper Food and Symptom Journals for Patients with Irritable Bowel Syndrome** 2016
Jasmine Zia, Chia-Fang Chung, Jessica Schroeder, Sean A. Munson, Julie A. Kientz, James Fogarty, Elizabeth Bales, Jeanette Schenk, Margaret Heitkemper
Neurogastroenterology and Motility;28:25-26
- J2 **Implementation of a New Kiosk Technology for Blood Pressure Management in a Family Medicine Clinic: from the WWAMI region Practice and Research Network** 2016
Chia-Fang Chung, Sean A. Munson, Matthew J. Thompson, Laura-Mae Baldwin, Jeffrey Kaplan, Randall Cline, Beverly B Green
Journal of the American Board of Family Medicine 2016;29:620-629
- J1 **More Than Telemonitoring: Health Provider Use and Nonuse of Life-Log Data in Irritable Bowel Syndrome and Weight Management** 2015
Chia-Fang Chung, Jonathan Cook, Elizabeth Bales, Jasmine Zia, Sean A. Munson
Journal of Medical Internet Research 2015;17(8):e203

Refereed Conference Papers with Proceedings

- c8 **Opportunities for Oral Health Monitoring Technologies Beyond the Dental Clinic** 2018
Adele Parsons, Chia-Fang Chung, Molly Donohue, Sean Munson, Eric Seibel
Pervasive Health 2018 (327-335)
- c7 **Examining Self-Tracking by People with Migraine: Goals, Needs, and Opportunities in a Chronic Health Condition** 2018
Jessica Schroeder, Chia-Fang Chung, Daniel A. Epstein, Ravi Karkar, Adele Parsons, Natalia Murinova, James Fogarty, Sean A. Munson
DIS 2018 (135-148). **Best Paper Honorable Mention (Top 5%)**
- c6 **Finding the Right Fit: Understanding Health Tracking in Workplace Wellness Programs** 2017
Chia-Fang Chung, Nanna Gorm, Irina Shklovski, Sean A. Munson
CHI 2017 (4875-4886). **Best Paper Honorable Mention (Top 5%)**
- c5 **When Personal Tracking Becomes Social: Examining the Use of Instagram for Healthy Eating** 2017
Chia-Fang Chung, Elena Agapie, Jessica Schroeder, Sonali Mishra, James Fogarty, Sean A. Munson
CHI 2017 (1674-1687).

- c4 **Supporting Patient-Provider Collaboration to Identify Individual Triggers using Food and Symptom Journals** 2017
Jessica Schroeder, Jane Hoffswell, Chia-Fang Chung, James Fogarty, Sean Munson, Jasmine Zia
CSCW 2017. (1726-1739).
- c3 **Integrating Population-based Patterns with Personal Routine to Re-engage Fitbit Use** 2016
Chia-Fang Chung and Catalina M. Danis
PervasiveHealth 2016 (154-161).
- c2 **Boundary Negotiating Artifacts in Personal Informatics: Patient-Provider Collaboration with Patient-Generated Data** 2016
Chia-Fang Chung, Kristin Dew, Alison Cole, Jasmine Zia, James Fogarty, Julie A. Kientz, Sean A. Munson
CSCW 2016 (770-786). **Best Paper Award (Top 1%)**
- c1 **GreenOlive: An open platform for wellness management ecosystem** 2010
Liangzhao Zeng, Pei-Yue Hsueh, Henry Chang, Christina Chung, Rick Huang
IEEE SOLI 2010 (88-93).

Abstracts and Extended Abstracts

-
- A8 **Supporting patient-provider communication and engagement with personal informatics data** 2017
Chia-Fang Chung
UbiComp/ISWC 2017 Doctoral Colloquium
- A7 **The Feasibility, Usability and Perceived Clinical Utility of Traditional Paper Food and Symptom Journals for Patients with Irritable Bowel Syndrome** 2016
Jasmine Zia, Chia-Fang Chung, Jessica Schroeder, Jeanette Schenk, Sean Munson, Julie Kientz, James Fogarty, Margaret Heitkemper
The 2nd Federation of Neurogastroenterology & Motility Joint International Meeting (FNM 2016), San Francisco, CA.
- A6 **Flip the Clinic: Implementing Patient Self-measurement of Blood Pressure Using a Kiosk in a Clinic Waiting Room** 2016
Beverly B. Green, Chia-Fang Chung, Laura-Mae Baldwin, Sean Munson, Matthew J. Thompson
2016 American Society of Hypertension Annual Meeting, New York City
- A5 **Patient and Provider Goals and the Using Patient-Generated Data in IBS and Weight Management** 2016
Chia-Fang Chung, Kristin Dew, Jonathan Cook, Elizabeth Bales, Alison Cole, Jasmine Zia, James Fogarty, Julie Kientz, Sean Munson
Workshop on Interactive Systems in Healthcare (WISH), CHI 2016.
- A4 **Inter-rater Reliability of Healthcare Provider Interpretations of Food and Gastrointestinal Symptom Paper Diaries of Patients with Irritable Bowel Syndrome** 2016
Jasmine Zia, Chia-Fang Chung, Kaiyuan Xu, Yi Dong, Kevin Cain, Sean Munson, Margaret Heitkemper
2016 Digestive Disease Week, San Diego, CA.
- A3 **Patient and Provider Goals and Collaboration Process of Using Patient-Generated Data** 2016
Chia-Fang Chung, Kristin Dew, Jonathan Cook, Elizabeth Bales, Alison Cole, Jasmine Zia, James Fogarty, Julie Kientz, Sean Munson
Symposium on Use of Patient-Generated Data Beyond Self-Regulation. 2016 Conference of the International Society for Research on Internet Interventions (ISRII). Seattle, WA.

- A2 Temperature Sharing to Support Remote Relationships** 2014
Chia-Fang Chung, James Hwang, Sean Munson
UbiComp Adjunct 2014 (27-30)
- A1 Modeling Conceptual Work Products in a Multiple Sclerosis Clinic to Design a Superior User Interface** 2013
Andrew Berry, Craig Harrington, Keith Butler, Melissa Braxton, Mark Haselkorn, Amy Walker, Mark Oberle, Chia-Fang Chung, Nikki Pete, W. Paul Nichol
Workshop on Interactive Systems in Healthcare (WISH), AMIA 2013

Workshop Papers

-
- w4 Supporting Patient-Provider Communication and Relationships with Personal Informatics Data** 2017
Chia-Fang Chung, Jessica Schroeder, Jasmine Zia, James Fogarty, Julie A. Kientz, Sean A. Munson
Workshop on Quantified Data and Social Relationship, CHI 2017
- w3 Evidence-based HealthIT for Patient-Provider Communication** 2013
Keith Butler, Mark Haselkorn, Melissa Brazton, W. Paul Nichol, Andrew Berry, Chia-Fang Chung
Workshop on Patient-Clinician Communication, CHI 2013
- w2 An Intervention Recommendation Engine Approach for Chronic Disease Management** 2012
Christina CF Chung
Technical session on CPMS, the practice section, INFORMS International 2012
- w1 Monitor as a Services: Highly scalable event management platform in a cloud environment** 2011
Christina CF Chung, Rick TC Huang
IBM Regional Technical Exchange 2011

Media Coverage

-
- M11 How the 'Instagram diet' works**
Lisa Drayer. CNN. 11 August 2017
<http://www.cnn.com/2017/08/11/health/instagram-diet-food-drayer/index.html>
- M10 Food photography a healthy habit for some**
Ted Land. King 5 TV. 3 May 2017.
<http://www.king5.com/news/local/food-photography-a-healthy-habit-for-some/436534037>
- M9 People Are Using Instagram as a Dieting Tool—And Maybe That's Not a Bad Thing**
Caroline Cunningham. The Washingtonian. 2 May 2017
<https://www.washingtonian.com/2017/05/02/people-are-using-instagram-as-a-dieting-tool-and-maybe-thats-not-a-bad-thing/>
- M8 Here's How Instagram Can Help You Eat Healthier**
Alisa Hrustic. Men's Health. 28 April 2017
<http://www.menshealth.com/nutrition/how-instagram-can-help-you-eat-healthier>
- M7 Instagram Food Photos Keep Dieters on Track**
Jessica Friger. Newsweek. 27 April 2017
<http://www.newsweek.com/food-diary-diet-instagram-social-media-591322>
- M6 Instagram may help users track food intake**
Amy Wallace. UPI. 26 April 2017
<http://www.upi.com/Instagram-may-help-users-track-food-intake/3741493225922/>

- M5 People turn to Instagram to eat healthier, UW study says**
 Madelaine VanDerHeyden. King 5. 27 April 2017.
<http://www.king5.com/news/health/instagram-foodies-have-healthier-diets-study-says/434311750>
- M4 UW study finds food in your Instagram feed helps some users track and maintain healthy habits**
 Kurt Schlosser. GeekWire. 26 April 2017
<http://www.geekwire.com/2017/uw-study-finds-food-instagram-feed-helps-users-track-maintain-healthy-habits/>
- M3 Could Posting Your Food Photos Help You Eat Healthier?**
 Jillian Kramer. Food & Wine. 27 April 2017
<http://www.foodandwine.com/news/could-posting-your-food-photos-help-you-eat-healthier>.
- M2 Bridging Expectations Between Doctors and Patients When It Comes To Digital Data**
 Jennifer Wing. KNKX News for Seattle and the Northwest, 14 March 2016
<http://knkx.org/post/bridging-expectations-between-doctors-and-patients-when-it-comes-digital-data>
- M1 UW paper addresses fitness app disconnect between providers and patients**
 Aly Brady. The Daily, 11 March 2016
http://www.dailyuw.com/news/article_dac52596-e743-11e5-a07d-9379d8ab7f7c.html

Invited Talks

	Using Personal Informatics Data in Collaboration with People with Different Expertise	
T10	Guest Lecture, INFO 407: Health Informatics	2018
T9	Guest Lecture, HCDE 419: Concepts in Human-Computer Interaction	2018
T8	School of Computing, The University of Utah	2018
T7	Precision Health Informatics, School of Informatics, Computing, and Engineering, Indiana University Bloomington	2018
T6	Information Systems, University of Maryland, Baltimore County	2018
T5	Management Science, University of Waterloo	2018
T4	Computer Science, University of Illinois at Chicago	
	When Personal Tracking Becomes Social: Examining the Use of Instagram for Healthy Eating	
T3	Guest Lecture, Health Services 204, Communicating About Health: Current Issues and Perspectives	2017
	Video Interpretation Service Platform for Hearing-impaired People	
T2	IBM Academy of Technology 2010 Academy Collaboration Conference	2010
T1	The 6 th China Information Accessibility Forum, Beijing, China, November 2 nd 2009	2009

Teaching Experience

Instructor

INFO 609: Advanced Seminar (Health Informatics: Personal Informatics and Beyond) Autumn 2018

Research Group Mentorship

HCDE 496/596: Supporting Healthy Eating Data Generation & Sharing with Health Experts Autumn 2017

HCDE 496/596: Patient-Provider Sharing of Consumer Lifelogs Spring 2015

HCDE 496/596: Technology Support for Health & Wellness (Goal Setting) Autumn 2013 - Spring 2014

HCDE 496/596: Technology Support for Health & Wellness (Temperature Sharing to Support Remote Relationship) Spring & Autumn 2013

Individual Student Mentorship

Qiaosi Wang (iSchool undergraduate student) Summer - Fall 2017

Kaiyuan Xu (HCDE master student) Spring & Fall 2015

Sayna Parsi (HCDE undergraduate student)	Spring - Summer 2015
Graduate Teaching Assistant, Human Centered Design & Engineering	
HCDE 310: Interactive System Design & Technology (Sean Munson)	Autumn 2017
HCDE 310: Interactive System Design & Technology (Sean Munson)	Autumn 2016
HCDE 310: Interactive System Design & Technology (Sean Munson)	Autumn 2014
HCDE 310: Interactive System Design & Technology (Sean Munson)	Autumn 2013
HCDE 310: Communication Design & Technology (Sean Munson)	Autumn 2012

Work Experience

IBM Greater China Developer Lab, Taipei, Taiwan	
iConnect: Mobile Location-based Assistant for Deaf Community	2011 - 2012
Chief Architect, User Experience Researcher and Team Leader (4 team members)	
Architected, designed and implemented server platform and mobile app to facilitate task distribution among sign-language interpreters and to help deaf users locate interpreters nearby	
<i>This project won the IBM Centennial Grant Award for Community Service</i>	
Video Interpretation Service Platform for Hearing-impaired People	2009 - 2010
Chief Architect, Chief Programmer and User Experience Researcher	
Architected, performed user centered design, and implemented an integrated platform on mobile devices to help deaf people communicate with others via interpretation service	
Established the first video interpretation center in Asia and successfully supported Summer Deaflympics 2009, Taipei	
<i>Adopted by Taipei City Government and served deaf communities in Taiwan since 2009</i>	
Intelligent Receptionist: next generation smart banking teller system	2008
Chief Architect, Project Lead and Chief Programmer	
Developed an integrated personal financial service system to promote service quality and sale	
<i>Deployed and in production in more than 200 branches of one major bank in Taiwan</i>	
IBM RFID Asset Management System	2006 - 2007
Chief Programmer	
Designed and implemented mobile asset management client, RFID reader agent, and database	
<i>Deployed and in production in IBM China Development Lab since 2007</i>	

Patents

Lifestyle progression models for use in preventative care	2012
Matthew Chen, Christina Chung, Rick Huang, June-Ray Lin, Ya-Fen Yeh, Xinxin Zhu	
United States Patent 20140188507	
Health Management Application Development and Deployment Framework	2010
Hung-Yang Chang, Chia-Fang Chung, Pei-Yun Sabrina Hsueh, Tsung-Chi Huang, Liangzhao Zeng	
United States Patent 20120046966A1	

Awards

2018 Sage Assembly Young Investigator Award	2018
UbiComp/ISWC 2017 Doctoral Colloquium Travel Grant	2017
CHI 2017 Best Paper Honorable Mention (C6)	2017
Consortium for the Science of Sociotechnical System (CSST) 2016 Summer Institute Travel Grant	2016
CHI 2016 Workshop on Interactive Systems in Healthcare (WISH) Travel Grant	2016
CRA-W Graduate Cohort Travel Grant	2016
CSCW 2016 Best Paper Award (C2)	2016
UbiComp/ISWC 2014 Broadening Participation Workshop Travel Grant	2014

Shobe Prize Finalist	2014
IBM Team Award (Supporting iConnect project to win the IBM Centennial Grant)	2011
IBM First Patent Application Invention Achievement Award	2010
IBM Award of Distinction (Volunteering to Chinese Deaf Association and supporting the 21st Summer Deaflympics Taipei)	2009

Community Services

Associate Chair. CHI 2019. Interaction Beyond the Individual	2018
Session Chair. CHI 2018	2018
Student Coordinator. DUB Doctoral Consortium	2017
Student Coordinator. DUB Seminar	2016 - Now
Volunteer Mentor. UW Dream Project College Admission Workshop	2016
Reviewer. CHI (2014-2018), DIS (2018), Ubicomp (2014, 2016), CSCW (2014-2018), MobileHCI (2015-2016), PervasiveHealth (2016-2017), IMWUT, JMIR, CACM.	2014 - Now
Student Volunteer. CSCW 2017 (Portland), CHI 2014 (Toronto), UbiComp 2014 (Seattle), SIGDOC 2012 (Seattle)	2012 - 2014
Volunteer Mentor. Community Data Science Workshop	2014
Co-Founder. Mobile technology Community in IBM China Development Lab, Taipei	2010 - 2011
Volunteer. Chinese Deaf Association and support Summer Deaflympics	2009
Volunteer. IBM Engineering Weeks	2007 - 2011
Mentor. IBM Summer Interns and Women in Technology Group	2006 - 2011