# Daniel A. Epstein

# Education

#### 2012-(2018) University of Washington

Ph.D. Candidate in Computer Science & Engineering (ABD)

Areas: Human-Computer Interaction, Ubiquitous Computing, Social Computing, Health

Advisors: James Fogarty, Sean Munson

Committee: James Fogarty, Sean Munson, David McDonald, Mira Dontcheva, Jessica Hullman

M.S. Computer Science & Engineering, Winter 2014

# 2008-2012 University of Virginia

B.S. Computer Science with Highest Distinction

Advisors: Kevin Skadron, Aaron Bloomfield

# Conference Publications

#### 2018 C12 Examining Self-Tracking by People with Migraine: Goals, Needs, and Opportunities in a Chronic Health Condition

Jessica Schroeder, Chia-Fang Chung, Daniel A. Epstein, Ravi Karkar, Adele Parsons, Natalia Murinova, James Fogarty, Sean A. Munson DIS 2018 [Acceptance Rate 23%]

#### 2017 C11 **Examining Menstrual Tracking to Inform the Design of Personal Informatics Tools**



Daniel A. Epstein, Nicole B. Lee, Jennifer H. Kang, Elena Agapie, Jessica Schroeder, Laura R. Pina, James Fogarty, Julie A. Kientz, Sean A. Munson

CHI 2017 [Acceptance Rate 25%] Best Paper Award, Top 1% of Submissions

#### C10 TummyTrials: A Feasibility Study of Using Self-Experimentation to Detect Individualized Food Triggers



Ravi Karkar, Jessica Schroeder, Daniel A. Epstein, Laura R. Pina, Jeffrey Scofield, James Fogarty, Julie A. Kientz, Sean A. Munson, Roger Vilardaga, Jasmine Zia

CHI 2017 [Acceptance Rate 25%] Best Paper Honorable Mention, Top 5% of Submissions

#### 2016 **C9** Reconsidering the Device in the Drawer: Lapses as a Design Opportunity in Personal Informatics

Daniel A. Epstein, Jennifer H. Kang, Laura R. Pina, James Fogarty, Sean A. Munson UbiComp 2016 [Acceptance Rate 24%]

#### **C8** Taking 5: Work-Breaks, Productivity, and Opportunities for Personal Informatics for Knowledge Workers

Daniel A. Epstein, Daniel Avrahami, Jacob T. Biehl CHI 2016 [Acceptance Rate 23%]

#### **C7** Crumbs: Lightweight Daily Food Challenges to Promote Engagement and Mindfulness

Daniel A. Epstein, Felicia Cordeiro, James Fogarty, Gary Hsieh, Sean A. Munson CHI 2016 [Acceptance Rate: 23%]

#### Beyond Abandonment to Next Steps: Understanding and Designing for **C6** Life after Personal Informatics Tool Use

Daniel A. Epstein, Monica Caraway, Chuck Johnston, An Ping, James Fogarty, Sean A. Munson CHI 2016 [Acceptance Rate: 23%]

#### 2015 C5 A Lived Informatics Model of Personal Informatics

<u>Daniel A. Epstein</u>, An Ping, James Fogarty, Sean A. Munson UbiComp 2015 [Acceptance Rate: 30%]

# C4 Barriers and Negative Nudges: Exploring Challenges in Food Journaling

Felicia Cordeiro, <u>Daniel A. Epstein</u>, Edison Thomaz, Elizabeth Bales, Arvind K. Jagannathan, Gregory D. Abowd, James Fogarty CHI 2015 [Acceptance Rate: 23%] Best Paper Honorable Mention, Top 5% of Submissions

#### C3 From "nobody cares" to "way to go!": A Design Framework for Social Sharing in Personal Informatics

<u>Daniel A. Epstein</u>, Bradley H. Jacobson, Elizabeth Bales, David W. McDonald, Sean A. Munson CSCW 2015 [Acceptance Rate: 28%]

# 2014 C2 Taming Data Complexity in Lifelogs: Exploring Visual Cuts of Personal Informatics Data

<u>Daniel A. Epstein</u>, Felicia Cordeiro, Elizabeth Bales, James Fogarty, Sean A. Munson DIS 2014 [Acceptance Rate: 26%]

# 2013 C1 Fine-Grained Sharing of Sensed Physical Activity: A Value Sensitive Approach

<u>Daniel A. Epstein</u>, Alan Borning, James Fogarty UbiComp 2013 [Acceptance Rate: 23%]

# Journal Publications

#### 2018 J3 Defining Adherence: Making Sense of Physical Activity Tracker Data

Lie Ming Tang, Jochen Meyer, <u>Daniel A. Epstein</u>, Kevin Bragg, Lina Engelen, Adrian Bauman, Judy Kay Proceedings of the ACM: Interactive Mobile, Wearable and Ubiquitous Technologies (IMWUT), Volume 1 Issue 1

# 2017 J2 Friends Don't Need Receipts: The Curious Case of Social Awareness Streams in the Mobile Payment App Venmo

Monica Caraway, <u>Daniel A. Epstein</u>, Sean A. Munson Proceedings of the ACM: Human-Computer Interaction, Volume 1 Issue CSCW [Acceptance Rate 27%]

#### J1 Semi-automated tracking: A Balanced Approach for Self-Monitoring Applications

Eun Kyoung Choe, Saeed Abdullah, Mashfiqui Rabbi, Edison Thomaz, <u>Daniel A. Epstein</u>, Matthew Kay, Felicia Cordeiro, Gregory D. Abowd, Tanzeem Choudhury, James Fogarty, Bongshin Lee, Mark Matthews, Julie A. Kientz IEEE Pervasive Computing, Volume 16 Issue 1

# Workshops Organized

#### 2018 O3 A Short Workshop on Next Steps Toward Long Term Tracking

Jochen Meyer, <u>Daniel A. Epstein</u>, Parisa Eslambolchilar, Judy Kay, Lie Ming Tang CHI 2018 Workshop

# 2017 O2 New Frontiers of Quantified Self 3: Exploring Understudied Categories of Users

Amon Rapp, Federica Cena, Judy Kay, Bob Kummerfeld, Frank Hopfgartner, Till Plumbaum, Jakob Eg Larsen, <u>Daniel A. Epstein</u>, Rúben Gouveia UbiComp 2017 Workshop

### 2016 O1 New Frontiers of Quantified Self 2: Going Beyond Numbers

Amon Rapp, Federica Cena, Judy Kay, Bob Kummerfeld, Frank Hopfgartner, Till Plumbaum, Jakob Eg Larsen, <u>Daniel A. Epstein</u>, Rúben Gouveia UbiComp 2016 Workshop

# **Workshop Publications**

# 2017 W9 Exploring Opportunities for Storytelling with Everyday Personal Data

<u>Daniel A. Epstein</u>, James Fogarty, Sean A. Munson
CHI 2017 Workshop (Quantified Data & Social Relationships)

# 2017 W8 Exploring New Design Directions for Menstrual Tracking Technology

<u>Daniel A. Epstein</u>, Nicole B. Lee, Jennifer H. Kang, Elena Agapie, Jessica Schroeder, Laura R. Pina, James Fogarty, Julie A. Kientz, Sean A. Munson CHI 2017 Workshop (Hacking Women's Health)

## 2015 W7 Personal Informatics in Everyday Life

<u>Daniel A. Epstein</u>

UbiComp/ISWC 2015 Doctoral School

## W6 Wearables of 2025: Designing Personal Informatics at a Broader Audience

<u>Daniel A. Epstein</u>, Nicole B. Lee, Elizabeth Bales, James Fogarty, Sean A. Munson CHI 2015 Workshop (Beyond Personal Informatics: Designing for Experiences with Data)

## 2014 W5 Failures in Sharing Personal Data on Social Networking Sites

<u>Daniel A. Epstein</u>, James Fogarty, Sean A. Munson UbiComp 2014 Workshop (Disasters in Personal Informatics: The Unpublished Stories of Failure and Lessons Learned)

### W4 Design Considerations for Socially Sharing Quantified Self

<u>Daniel A. Epstein</u>, Elizabeth Bales and Sean A. Munson CHI 2014 Workshop (Beyond Quantified Self: Data for Wellbeing)

# 2013 W3 Improving Personal Informatics Through Social Sharing

<u>Daniel A. Epstein</u>
UbiComp/ISWC 2013 Doctoral School (Junior Track)

### W2 Examining Obstacles to Sharing Fine-Grained Personal Activity Data

<u>Daniel A. Epstein</u> and James Fogarty

CHI 2013 Workshop (Personal Informatics in the Wild: Hacking Habits for Health & Happiness)

# 2012 W1 Multi-Granularity Redundancy in Multi-Core SIMT

Daniel A. Epstein, Kevin Skadron, and Brett H. Meyer (2012).

DFM&Y 2012 (Workshop on Design for Manufacturability and Yield)

# **Teaching Experience**

University of Washington

**2016** Teaching Assistant, Advanced Topics in HCI (CSE 510)

Professor: James Fogarty. Aided in course design, project feedback.

2015 Teaching Assistant, HCI Capstone (CSE 441)

Professor: James Fogarty. Aided in course design, project critiques.

**2014** Head Teaching Assistant, Introduction to HCI (CSE 440)

Professor: James Fogarty. Aided in course design, lecture preparation, project critiques.

**2013-Present** Research mentorship, Directed Research Groups (HCDE 496/596)

With Sean Munson from 2013 to 2015. Mentored 19 masters and undergraduate students over 5 quarters.

Work from group resulted in C3, C5, C6, W4, with student coauthors on C3, C5, C6.

Individual Students mentored outside Directed Research Groups

Monica Caraway (HCDE M.S., coauthor on C6, first author on J2)

Sol Choi (HCDE B.S.)

Jennifer Kang (CSE & iSchool B.S., coauthor on C9, C11, W8)

Tejas Bharadwaj (summer research, visiting from Bellevue High School)

King Xia (CSE B.S. honors thesis)

Jennifer Kam (summer research, visiting from Wellsley College)

2013-2016 Tutor

Data Structures and Algorithms (CSE 373), Data Abstractions (CSE 332),

Software Design & Implementation (CSE 331), Database Systems Internals (CSE 444)

University of Virginia

2009-2012 Teaching Assistant

Introduction to Programming (CS 1110), Operating Systems (CS 4414),

Game Design (CS 4501), Algorithms (CS 4102), Program and Data Representation (CS 2150)

**Professional Experience** 

Summer Adobe, Research Intern, Creative Intelligence Lab

2017 Mentor: Mira Dontcheva

Designing for telling stories of accomplishment with personal data.

**Summer** FXPAL, Research Intern

2015 Mentors: Daniel Avrahami, Jacob Biehl

Understanding and designing for breaks taken by knowledge workers, published in C8.

**2012-Present** University of Washington, Research Assistant, DUB Group

Advisors: James Fogarty, Sean Munson

Exploring how personal informatics can align with people's everyday experiences.

2010-2012 University of Virginia, Undergraduate Research Assistant, LAVA Lab

Advisors: Kevin Skadron, Brett Meyer

Increasing manufacturing reliability in single-instruction, multiple-data (SIMD) processors.

Summer Microsoft, Software Development Engineer in Test Intern, Xbox

2011, 2012 Wrote web service test framework for issuing game console commands

# Awards, Honors, and Service

| 2018<br>2017<br>2016<br>2015  | Program Committees CHI Workshop on Data Visualization on Mobile Devices PervasiveHealth CHI Workshop on Quantified Data and Social Relationships CHI Late-Breaking Work HealthWear UbiComp Workshop on New Frontiers on Quantified Self  |
|---|--|
| 2014-2018<br>2017-2018<br>2014-2017<br>2016-2018<br>2017<br>2014-2015 | Reviewing CHI CSCW UbiComp/IMWUT DIS UIST MobileHCI Additional Journals including TiiS, IEEE Pervasive, and Human-Computer Interaction Special recognitions for reviewing at DIS 2016, CSCW 2017, CHI 2017, DIS 2017, CHI 2018, DIS 2018 |
| 2017<br>2016<br>2014<br>2013  | Student Volunteering UbiComp/ISWC Student Volunteer Chair UbiComp/ISWC UIST Program Committee Meeting UbiComp/ISWC UbiComp/ISWC CHI  |
| 2016-2017<br>2013-2017<br>2013  | Other Service DUB Student Coordinator UW ACM International Collegiate Programming Contest (ICPC) Coach DUB Food Coordinator  |
| 2017  | Awards Adobe Research Fellowship Finalist Best Paper Award, CHI (for C11, top 1%) Best Paper Honorable Mention, CHI (for C10, top 5%)  |
| 2015  | Best Paper Honorable Mention, CHI (for C4, top 5%) UbiComp Travel Grant  |
| 2013  | UbiComp Travel Grant   |
| 2012<br>2011  | Louis T. Rader UVA CS Departmental award for excellence in service Louis T. Rader UVA CS Departmental award for excellence in teaching   |
| 2011  | Invited Talks and Guest Lectures   |

# invited Talks and Guest Lectures

**Everyday Personal Informatics** 2018

University of Chicago, March 2018

**Everyday Personal Informatics** University of Utah, February 2018

### **Everyday Personal Informatics**

University of Rochester, February 2018

#### **Everyday Personal Informatics**

Pennsylvania State University, January 2018

### **Everyday Personal Informatics**

FXPAL, January 2018

#### **Everyday Personal Informatics**

University of California, Santa Cruz, January 2018

#### 2017 Personal Tracking in Everyday Life

Fitbit, July 2017

# **Everyday Personal Informatics**

Guest Lecture, HCDE 419 (Concepts in HCI), University of Washington, May 2017

# 2016 Crumbs: Lightweight Daily Food Challenges to Promote Engagement and Mindfulness

Computer Science & Engineering Industrial Affiliates, University of Washington, October 2016

# **Behavior Change and Personal Informatics**

Guest Lecture, HCDE 419 (Concepts in HCI), University of Washington, April 2016

Using Personal Data in Everyday Life: Actionable Insights, Self-Representation, and Eliciting Support International Society for Research on Internet interventions (ISRII) Scientific Meeting, April 2016

### **Experiment Design and Statistics**

Guest Lecture, CSE 510 (Advanced Topics in HCI), University of Washington, January 2016

# 2015 A Lived Informatics Model of Personal Informatics

#### Barriers and Negative Nudges: Exploring Challenges in Food Journaling

Computer Science & Engineering Industrial Affiliates, University of Washington, October 2015

#### A Lived Informatics Model of Personal Informatics

FXPAL, September 2015

#### Personal Informatics in Everyday Life

HCI Seminar, Stanford University, September 2015

#### Receiving Value and Social Support from Personal Informatics Data

University of Maryland, January 2015

# 2014 More than Interaction Design: Exposing the Breadth of HCI

Guest Lecture, CS 3205 (HCI in Software Development), University of Virginia, October 2014

### Task Analysis

Guest Lecture, CSE 440 (Introduction to HCI), University of Washington, October 2014

### 2013 Fine-Grained Sharing of Sensed Physical Activity: A Value Sensitive Approach

Computer Science & Engineering Industrial Affiliates, University of Washington, October 2013

# Selected Press

# 2017 Are You Making This Top Tracker Mistake? Here's How to Stop

Fitbit Blog (Danielle Kosecki, October 2017)

https://blog.fitbit.com/memory-techniques

#### Chances Are Your Period App is B.S.

Cosmopolitan (Elizabeth Narins, May 2017)

http://www.cosmopolitan.com/health-fitness/a9598638/period-app-accuracy/

#### Do Period Tracking Apps Work? They Might Not be as Accurate as You Think

Bustle (Georgina Lawton, May 2017)

https://www.bustle.com/p/do-period-tracking-apps-work-they-might-not-be-as-accurate-as-you-think-55743

# The Awful Pinkness of Period Apps

The Atlantic (Sarah Zhang, May 2017)

https://www.theatlantic.com/health/archive/2017/05/period-apps-pink/525207/

#### How to Choose a Period Tracking App that Actually Works for You

Health.com (Amanda MacMillan, May 2017)

http://www.health.com/sexual-health/period-tracker-app-complaints

# Period tracking apps often 'disappoint'

Gynecology and Technology (May 2017)

http://www.figo.org/news/period-tracking-apps-often-'disappoint'-0015561

#### Period-Tracking Apps get Failing Grade: They're Not Accurate. And They're Way Too Pink.

STAT News (Usha Lee McFarling, May 2017)

https://www.statnews.com/2017/05/02/period-tracking-apps-flaws/

### **2016** From the Community: What Happens When You Take Off Your Fitness Tracker?

Chicago Tribune (Advocate Christ Medical Center, September 2016)

http://www.chicagotribune.com/suburbs/daily-southtown/community/chi-ugc-article-what-happens-when-you-take-off-your-fitness-t-2016-09-16-story.html

#### This is What Happens When You Stop Using Your Fitness Tracker

Men's Fitness (Brittany Smith, September 2016)

http://www.mensfitness.com/life/gearandtech/what-happens-when-you-stop-using-your-fitness-tracker

#### From Guilt to Relief: The Emotional Impact of Giving Up Activity Tracking

Yahoo! News, Digital Trends (September 2016)

https://www.yahoo.com/news/guilt-relief-emotional-impact-giving-070948996.html

#### Why You Shouldn't Feel Guilty About Ditching Your Fitbit

Time.com (Amanda MacMillan, September 2016)

http://time.com/4500481/fitbit-fitness-tracker/

#### Feel Guilty About Ditching Your Fitbit? You're Not Alone

Health.com (Amanda MacMillan, September 2016)

http://www.health.com/fitness/fitbit-use-guilt

#### New Reasons Why You Should Keep a Food Journal

Wall Street Journal (Sumathi Reddy, May 2016)

http://www.wsj.com/articles/new-reasons-why-you-should-keep-a-food-journal-1463419285

# 2015 Food Journaling not as Easy or Effective as it Should Be: Study

Consumer Affairs (Christopher Maynard, April 2015)

 $\underline{https://www.consumeraffairs.com/news/food-journaling-not-as-easy-or-effective-as-it-should-be-study-041715.html}$ 

# Why People Ditch Food Journal Apps

New York Magazine (Jesse Singal, April 2015)

http://nymag.com/scienceofus/2015/04/why-people-ditch-food-journal-apps.html

# 2014 UW Study Finds Pros and Cons of Fitness Gadgets

King 5 News (July 2014)

# References

### **James Fogarty**

Professor, Computer Science & Engineering, University of Washington jfogarty@cs.washington.edu

#### Julie Kientz

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### Sean Munson

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#### Mira Dontcheva

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