Saeed Abdullah

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2017– **Assistant Professor**
College of Information Science and Technology
PennState University

Education

2011–2017 **PhD, Information Science, Cornell University**
Committee: Tanzeem Choudhury (chair), Geri Gay and Deborah Estrin
Dissertation: Circadian Computing: Sensing and Stabilizing Biological Rhythms

2011–2014 **Master of Science, Information Science, Cornell University**
Advisor: Tanzeem Choudhury

2009–2011 **Master of Science, Computer Science, University of Vermont**
Advisor: Xindong Wu

2003–2007 **Bachelor of Science, Computer Science & Engineering, Bangladesh University of Engineering & Technology**
Advisors: Dr Monirul Islam and Shohrab Hossain
Thesis: Evolution of Neural Network using Genetic Algorithm

Publications

Journal Articles

2018 J06 **Sensing technologies for monitoring serious mental illnesses**
Saeed Abdullah and Tanzeem Choudhury
IEEE Multimedia - Special Issue on New Signals in Multimedia (*in press*)

2017 J05 **Semi-automated tracking: a balanced approach for self-monitoring applications**
Eun Kyoung Choe, *Saeed Abdullah*, Mashfiqui Rabbi, Edison Thomaz, Daniel A. Epstein, Matthew Kay, Felicia Cordeiro, Gregory D. Abowd, Tanzeem Choudhury, James Fogarty, Bongshin Lee, Mark Matthews, and Julie A. Kientz.
IEEE Pervasive Computing.

2016 J04 **Development and evaluation of a smartphone-based measure of social rhythms for bipolar disorder**
Mark Matthews, *Saeed Abdullah*, Geri Gay, and Tanzeem Choudhury.
Assessment (ASM), 23(4), 472–483.

2015 J03 **Automatic detection of social rhythms in bipolar disorder**
Saeed Abdullah, Mark Matthews, Ellen Frank, Gavin Doherty, Geri Gay, and Tanzeem Choudhury.
Journal of the American Medical Informatics Association (JAMIA), 23(3), 538–543.

2015 J02 **Mobile behavioral sensing for outpatients and inpatients with schizophrenia**
Dror Ben-Zeev, Rui Wang, *Saeed Abdullah*, Rachel Brian, Emily Scherer, Lisa Mistler, Marta Hauser, John Kane, Andrew Campbell, and Tanzeem Choudhury.
Psychiatric Services, 67(5), 558–561.

2014 J01 **Tracking mental well-being: balancing rich sensing and patient needs**
Mark Matthews, *Saeed Abdullah*, Geri Gay, and Tanzeem Choudhury.
IEEE Computer, 47(4), 36–43

Conference Papers

2018 C15 **Understanding challenges in prehabilitation for patients with multiple chronic conditions**
Haining Zhu, Zachary Moffa, Xiying Wang, *Saeed Abdullah*, Juxihong Julaiti, and John Carroll
Pervasive Health
Acceptance rate: 24%

2016 C14 **Cognitive rhythms: Unobtrusive and continuous sensing of alertness using a mobile phone**
Saeed Abdullah, Elizabeth Murnane, Mark Matthews, Matthew Kay, Julie Kientz, Geri Gay, and Tanzeem Choudhury.
UbiComp: Conference on Pervasive and Ubiquitous Computing.
Acceptance rate: 23%

C13 **Shining (blue) light on creative ability**
Saeed Abdullah, Mary Czerwinski, Gloria Mark, and Paul Johns.
UbiComp: Conference on Pervasive and Ubiquitous Computing.
Acceptance rate: 23%

C12 **CrossCheck: Toward passive sensing and detection of mental health changes in people with schizophrenia**
Rui Wang, Min S.H. Aung, *Saeed Abdullah*, Dror Ben-Zeev, Rachel Brian, Andrew T Campbell, Tanzeem Choudhury, Marta Hauser, John Kane, Michael Merrill, Emily Scherer, and Vincent Wen-Sheng Tseng.
UbiComp: Conference on Pervasive and Ubiquitous Computing.
Acceptance rate: 23%

 C11 **Mobile manifestations of alertness: Connecting biological rhythms with patterns of smartphone app use**
Elizabeth Murnane, *Saeed Abdullah*, Mark Matthews, Matthew Kay, Julie Kientz, Geri Gay, Tanzeem Choudhury, Dan Cosley.
MobileHCI: Conference on human-computer interaction with mobile devices and services
Acceptance rate: 23.5%.
Best paper award (top 2 papers)

C10 **Detecting and capitalizing on physiological dimensions of psychiatric illness**

Mark Matthews, *Saeed Abdullah*, Geri Gay, and Tanzeem Choudhury.
PhyCS: Conference on Physiological Computing Systems

2015 C09 **Social (media) jet lag: How usage of social technology can modulate and reflect circadian rhythms**
Elizabeth L. Murnane, *Saeed Abdullah*, Mark Matthews, Tanzeem Choudhury, and Geri Gay.
UbiComp: Conference on Pervasive and Ubiquitous Computing.
Acceptance rate: 23%

C08 **In-situ design for mental illness: considering the pathology of bipolar disorder in mHealth design**
Mark Matthews, Stephen Voida, *Saeed Abdullah*, Gavin Doherty, Tanzeem Choudhury, Sangha Im, and Geri Gay.
MobileHCI: Conference on human-computer interaction with mobile devices and services
Acceptance rate: 27%

C07 **Collective smile: measuring societal happiness from geolocated images**
Saeed Abdullah, Elizabeth L. Murnane, Jean MR Costa, and Tanzeem Choudhury.
CSCW: Conference on Computer Supported Cooperative Work & Social Computing
Acceptance rate: 28%

C06 **MoodLight: Exploring personal and social implications of ambient display of biosensor data**
Jaime Snyder, Mark Matthews, Jacqueline Chien, Pamara F. Chang, Emily Sun, *Saeed Abdullah*, and Geri Gay.
CSCW: Conference on Computer Supported Cooperative Work & Social Computing
Acceptance rate: 28%

2014 C05 **Towards Circadian Computing: "early to bed and early to rise" makes some of us unhealthy and sleep deprived**
Saeed Abdullah, Mark Matthews, Elizabeth L. Murnane, Geri Gay, and Tanzeem Choudhury.
UbiComp: Conference on Pervasive and Ubiquitous Computing.
Acceptance rate: 20%

2012 C04 **Towards population scale activity recognition: a scalable framework for handling data diversity**
Saeed Abdullah, Nicholas Lane, and Tanzeem Choudhury.
AAAI: Conference on advancement of artificial intelligence
Acceptance rate: 26%

2011 C03 **An epidemic model for news spreading on twitter**
Saeed Abdullah, and Xindong Wu.
ICTAI: Conference on tools with artificial intelligence

Acceptance rate: 23%

2009 C02 **Evolving multilayer neural networks using permutation free encoding technique**
Anupam Das and *Saeed Abdullah*.
ICAI: Conference on artificial intelligence
Acceptance rate: 23%

2008 C01 **Permutation free encoding technique for evolving Neural networks**
Anupam Das, Md. Shohrab Hossain, *Saeed Abdullah*, and Rashed Ul Islam.
ISNN: Symposium on neural networks
Acceptance rate: 23%

Book chapter

2017 B01 **Circadian Computing: sensing, modeling, and maintaining Biological Rhythms**
Saeed Abdullah, Elizabeth L. Murnane, Mark Matthews, and Tanzeem Choudhury
Mobile Health: Sensors, Analytic Methods, and Applications edited by Jim Rehg, Susan Murphy, and Santosh Kumar.
Springer International Publishing

Workshop papers and abstracts

2016 W04 **Assessing mental health issues on college campuses: preliminary findings from a pilot study**
Vincent Wen-Sheng Tseng, *Saeed Abdullah*, Michael Merrill, Min Aung, Franziska Wittleder, and Tanzeem Choudhury.
UbiComp workshop on mental health

2015 W03 **Towards circadian computing: a sensing & intervention framework for body clock friendly technology**
Saeed Abdullah.
UbiComp doctoral colloquium

2013 W02 **Light, color, affect, and stress**
Jaime Snyder, Mark Matthews, *Saeed Abdullah*, Yohan Ko, and Geri Gay.
4S: Society for Social Studies of Science

W01 **Clockwise: inferring chronotype and daily patterns from smartphone use**
Saeed Abdullah.
UbiComp doctoral colloquium

Posters and demos

2015 P07 **Automatic detection of social rhythms in bipolar disorder via smartphone**
Ellen Frank, *Saeed Abdullah*, Mark Matthews, and Tanzeem Choudhury.
American College of Neuropsychopharmacology (ACNP)

2015 P06 **SAINT: a scalable sensing and inference toolkit**

Mashfiqui Rabbi, Thiago Caetano, Jean Costa, *Saeed Abdullah*, Mi Zhang, and Tanzeem Choudhury.
Workshop on Mobile Computing Systems and Applications (ACM HotMobile)

2014 P05 **Towards circadian computing: "early to bed and early to rise" makes some of us unhealthy and sleep deprived**
Saeed Abdullah, Mark Matthews, Elizabeth L. Murnane, Geri Gay, and Tanzeem Choudhury.
Intel Science and Technology Center for Pervasive Computing (ISTC-PC)

P04 **Circadian Computing: Towards bodyclock friendly technology**
Saeed Abdullah.
HCIC: Human Computer Interaction Consortium Workshop

2013 P03 **Developing a smartphone app to monitor mood, social rhythms, sleep and social activity: technology to support effective management of bipolar disorder**
Ellen Frank, Mark Matthews, Tanzeem Choudhury, Steve Voida, and *Saeed Abdullah*.
American College of Neuropsychopharmacology (ACNP)

P02 **MoodRhythm: Tracking and supporting daily rhythms**
Stephen Voida, Mark Matthews, *Saeed Abdullah*, Mengxi Chrissie Xi, Matthew Green, Won Jun Jang, Donald Hu, John Weinrich, Prashama Patil, Mashfiqui Rabbi, Tauhidur Rahman, Geri Gay, Ellen Frank, and Tanzeem Choudhury.
Interactive demo in UbiComp

2012 P01 **Towards population scale activity recognition: a framework for handling data diversity**
Saeed Abdullah, Nicholas D. Lane, and Tanzeem Choudhury.
Intel Science and Technology Center for Pervasive Computing (ISTC-PC)

Teaching experience

At PennState

Spring, 2017 **IST 525: Computer Supported Cooperative Work (CSCW)**
Students: 13

Fall, 2017 **IST 597: Computational Health: Sensing and Intervention Design**
Students: 7

At Cornell University

2014–2016 **Info 4120/6120: Ubiquitous Computing**
Instructor: Tanzeem Choudhury
Guest lecture on Circadian Computing and lab session on mobile programming

Spring, 2012 **CS/Info 2300: Intermediate design and programming for the web**

Instructor: Carl Lagoze. Students: 120
Led lab teaching sections, covered some lectures

Fall, 2012 **CS 4300: Information retrieval**
Instructor: Paul Ginsberg. Students: 122
Tutored students, marked assignments and reports

At University of Vermont

Spring, 2011 **CS 224: Algorithm design & analysis**
Instructor: Byung Lee
Covered some lectures, tutored students, marked assignments

Fall, 2010 **CS 32: Puzzles, games and algorithms**
Instructor: Robert Snapp
Led lab sessions, marked assignments

Fall, 2010 **CS 204: Database system**
Instructor: Byung Lee
Covered some lectures, tutored students, marked assignments

Spring, 2010 **CS 222: Computer architecture**
Instructor: Alan Ling
Tutored students, marked assignments

Spring, 2010 **CS 195: Computer science for geo-spatial technologies**
Instructor: Alison Pechenick
Developed and marked assignments

Fall, 2009 **CS 201: Operating systems**
Instructor: Alan Ling
Covered some lectures, tutored students, marked assignments

Fall, 2009 **CS 243: Theory of computation**
Instructor: Alan Ling
Tutored students, marked assignments

Awards

2016 **Best paper award in MobileHCI**
For the paper: Mobile manifestations of alertness: Connecting biological rhythms with patterns of smartphone app use.

2016 **Agile research grant from Robert Wood Johnson Foundation**
Our project focusing on circadian rhythms and cognitive performance was selected as one of the five recipients in the Agile Research Project competition.

2013 **$100,000 Heritage Open mHealth Challenge winner**

Our MoodRhythm project focusing on bipolar disorder won Heritage Open mHealth Challenge co-sponsored by Heritage Provider Network, Open mHealth, and the University of California, Los Angeles.

Invited talks

Spring, 2018 **Grand Rounds Series at PennState Psychology Department**
Title: Talking to Machines: Conversational Agents for Mental Health Care

2016 **Health Data Exploration Project Agile Grant Series**
Title: Passive sensing of circadian rhythms for individualized models of cognitive performance

2015 **Intel Science & Technology Center for Pervasive Computing (ISTC-PC)**
Title: Cognitive rhythms: unobtrusive and continuous sensing of alertness using a mobile phone

2014 **MIT & Cornell hacking-medicine hackathon**
Title: Supporting individuals with bipolar disorder to establish stable daily routines

Professional experience

Graduate research assistant at Cornell University

2014–2017 Funded by Intel Science & Technology Center for Pervasive Computing (ISTC-PC)
Supervisor: Tanzeem Choudhury
Exploring pervasive technology that supports circadian rhythm stability

2012–2014 Funded by Intelligence Advanced Research Projects Activity (IARPA)
Supervisor: Tanzeem Choudhury
Novel image based large scale sentiment analysis from social media

Fall, 2015 **Research intern, Microsoft Research Redmond**
Supervisor: Mary Czerwinski
Designed and developed novel system for improving creative ability

2011–2012 **Graduate teaching assistant at Cornell University**

2009–2011 **Graduate teaching assistant at University of Vermont**

2008–2009 **Software developer, AfriGIS Ltd**
Developing search engine with special focus on geographic relevance

2008 **Software developer, Google Summer of Code**
Enhancing a Just-In-Time (JIT) compiler for Java to provide instruction code selection and emission for array manipulation bytecodes.

Service

At PennState

2018 **Faculty advisory committee focusing on IT support for research**

2017–2018 **Reviewer for the Schreyer Honors College applications**

2017–2018 **Interviewer for the Millennium Scholars program**

At Cornell University

2011–2012 **Student volunteer for UbiComp program committee meeting**

2011–2013 **Student representative for faculty hiring committee**

2017 **Computing facilities support**

2014–2016 **Colloquium organizer**

Workshop organizer

2016–2017 **Mental health and well-being: Sensing and intervention**
Saeed Abdullah, Varun Mishra, Andrew T. Campbell, Gregory D. Abowd, and Tanzeem Choudhury.
Workshop at UbiComp

2014 **Biological rhythms and technology**
Mark Matthews, Erin Carroll, *Saeed Abdullah*, Jaime Snyder, Matthew Kay, Tanzeem Choudhury, Geri Gay, and Julie A. Kientz
Workshop at CHI

Program committee member

2014–2017 **Mental health and well-being: Sensing and intervention workshop at UbiComp conference**

2017 **ACII2017 workshop on tools and algorithms for mental health and well-being, pain, and distress (MHWPD)**

2015–2018 **International Conference on Digital Health**

2017–2018 **Pervasive Health**

Conference reviewer

2014–2016 **UbiComp**

2014–2017 **CHI**

2016 **CSCW**

2015–2018 **Pervasive Health**

2016–2018 **International Conference on Digital Health**

2017 **UIST**

Journal reviewer

2017–2018 **Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)**

2018 **Journal of Medical Internet Research (JMIR)**

2018 **Psychiatry Research**

2018 **Transactions on Affective Computing**

2017 **Transactions on Software Engineering**

2016 **IEEE Computer**

2016 **International Journal of Human-Computer Interaction**

2015 **Behavior Research Methods journal**

2013 **IEEE Transactions on Knowledge and Data Engineering**