C A	EED	Λрг	TIT T	A TT
3 A	EED	AKI	LIU	AH.

SAEED@PSU.EDU • SAEEDABDULLAH.COM

### 2024 - Associate Professor

College of Information Sciences and Technology Penn State University

### 2017 - 2024 Assistant Professor

College of Information Sciences and Technology Penn State University

### **EDUCATION**

2011 - 2017 Doctor of Philosophy, Information Science, Cornell University

2009 - 2011 Master of Science, Computer Science, University of Vermont

2003 – 2007 Bachelor of Science, Computer Science & Engineering, Bangladesh University of Engineering & Technology

### **PUBLICATIONS**

JOURNAL ARTICLES

## 2025 J25 There's No "I" in TEAMMAIT: Impacts of Domain and Expertise on Trust in AI Teammates for Mental Health Work

Nathaniel Swinger, Cynthia Baseman, Myeonghan Ryu, SAEED ABDULLAH, Christopher Wiese, Andrew Sherrill, and Rosa Arriaga Proceedings of the ACM on Human-Computer Interaction (PACM HCI) In press

### J24 Teaming with Artificial Intelligence to Learn and Sustain Psychotherapy Delivery Skills: Workplace, Ethical, and Research Implications

Andrew Sherrill, Christopher Wiese, SAEED ABDULLAH, and Rosa Arriaga Journal of Technology in Behavioral Science

DOI: 10.1007/s41347-025-00484-4

### 2024 J23 Exploring user engagement with real-time verbal feedback from an exoskeletonbased virtual exercise coach

Raju Maharjan, Sanjana Mendu, Milton Mariani, SAEED ABDULLAH, and John Hansen

DIGITAL HEALTH

DOI: 10.1177/20552076241302652

Last updated: April 1, 2025

### J22 Assessing acceptance and feasibility of a conversational agent to support individuals living with post-traumatic stress disorder

Hee Jeong Han, Sanjana Mendu, Beth Jaworski, Jason Owen, and SAEED ABDULLAH

DIGITAL HEALTH

DOI: 10.1177/20552076241286133

## J21 Using a Smartwatch App to Understand Young Adult Substance Use: Mixed Methods Feasibility Study

Sahiti Kunchay, Ashley Linden-Carmichael, and SAEED ABDULLAH *JMIR Human Factors* DOI: 10.2196/50795

### J20 Conversational Agents in Palliative Care: Potential Benefits, Risks, and Next Steps

Yael Schenker, SAEED ABDULLAH, Robert Arnold, and Kathryn Schmitz *Journal of Palliative Medicine* 

DOI: 10.1089/jpm.2023.0534

### 2023 J19 Designing voice interfaces to support mindfulness-based pain management

Sanjana Mendu, Sebrina Doyle Fosco, Stephanie Lanza, and SAEED ABDUL-LAH

DIGITAL HEALTH

DOI: 10.1177/20552076231204418

## J18 Busting the one-voice-fits-all myth: Effects of similarity and customization of voice-assistant personality

Eugene Snyder, Sanjana Mendu, S. Shyam Sundar, and SAEED ABDULLAH International Journal of Human-Computer Studies

DOI: 10.1016/j.ijhcs.2023.103126

### **I17** Technology Based Supportive Care for Metastatic Breast Cancer Patients

Kathryn Schmitz, Beth Kanski, Brett Gordon, Maxime Caru, Monali Vasakar, Cristina Truica, Ming Wang, Shawna Doerksen, Abby Lorenzo, Renate Winkels, Ling Qiu, and SAEED ABDULLAH

Supportive Care in Cancer

DOI: 10.1007/s00520-023-07884-3

## J16 Preliminary Evaluation of a Conversational Agent to Support Self-management of Individuals Living with PTSD: An Interview Study with Clinical Experts

Hee Jeong Han, Sanjana Mendu, Beth K Jaworski, Jason E Owen, and SAEED ABDULLAH

*JMIR Formative Research* DOI: 10.2196/45894

## J15 Women with metastatic breast cancer don't just follow step-count trends, they exceed them: An exploratory study

Maxime Caru, SAEED ABDULLAH, Ling Qiu, Bethany Kanski, Brett Gordon, Cristina Truica, Monali Vasakar, Shawna Doerksen, and Kathryn Schmitz Breast Cancer Research and Treatment

DOI: 10.1007/s10549-023-06980-6

## J14 Addressing metastatic individuals everyday: Rationale and design of the nurse AMIE for Amazon Echo Show trial among metastatic breast cancer patients

Brett Gordon, Ling Qiu, Shawna Doerksen, Bethany Kanski, Abigail Lorenzo, Cristina Truica, Monali Vasekar, Ming Wang, Renate Winkels, SAEED ABDULLAH, and Kathryn Schmitz

Contemporary Clinical Trials Communications

DOI: 10.1016/j.conctc.2023.101058

# 2022 J13 Financial technologies (FinTech) for mental health: The potential of objective financial data to better understand the relationships between financial behavior and mental health

Johnna Blair, Jeff Brozena, Mark Matthews, Thomas Richardson, and SAEED ABDULLAH

Frontiers in Psychiatry

DOI: 10.3389/fpsyt.2022.810057

## J12 Alexa as an Active Listener: How Backchanneling Can Elicit Self-Disclosure and Promote User Experience

Eugene Cho, Nasim Motalebi, S. Shyam Sundar, and SAEED ABDULLAH Proceedings of the ACM on Human-Computer Interaction (PACM HCI)
DOI: 10.1145/3555164

## J11 Overcoming Clinician Technophobia: What We Learned from Our Mass Exposure to Telehealth During the COVID-19 Pandemic

Andrew Sherrill, Christopher Wiese, SAEED ABDULLAH, and Rosa Arriaga *Journal of Technology in Behavioral Science* 

DOI: 10.1007/s41347-022-00273-3

### J10 Understanding Design Approaches and Evaluation Methods in mHealth Apps Targeting Substance Use: Protocol for a Systematic Review

Sahiti Kunchay, Ashley N Linden-Carmichael, Stephanie T Lanza, and SAEED ABDULLAH

*JMIR Research Protocols* DOI: 10.2196/35749

2021 JO9 A Query Conundrum: The Mental Challenges of Using a Cognitive Assistant
Torsten Maier, SAEED ABDULLAH, Christopher McComb, and Jessica Menold
SN Computer Science

DOI: 10.1007/s42979-021-00621-9

## 2020 J08 "It Didn't Sound Good with My Cochlear Implants": Understanding the Challenges of Using Smart Assistants for Deaf and Hard of Hearing Users

Johnna Blair and SAEED ABDULLAH

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Tech-

nologies (IMWUT) DOI: 10.1145/3432194

### 2018 J07 Sensing Technologies for Monitoring Serious Mental Illnesses

SAEED ABDULLAH and Tanzeem Choudhury

IEEE Multimedia — Special Issue on New Signals in Multimedia

DOI: 10.1109/MMUL.2018.011921236

## J06 Personalized stress monitoring: a smartphone-enabled system for quantification of salivary cortisol

Elizabeth Rey, Aadhar Jain, SAEED ABDULLAH, Tanzeem Choudhury, and David Erickson

*Personal and Ubiquitous Computing* DOI: 10.1007/s00779-018-1164-z

### 2017 J05 Semi-Automated Tracking: A Balanced Approach for Self-Monitoring Appli-

Eun Kyoung Choe, SAEED ABDULLAH, Mashfiqui Rabbi, Edison Thomaz, Daniel Epstein, Matthew Kay, Felicia Cordeiro, Gregory Abowd, Tanzeem Choudhury, James Fogarty, Bongshin Lee, Mark Matthews, and Julie Kientz

*IEEE Pervasive Computing*DOI: 10.1109/MPRV.2017.18

## 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)

DOI: 10.1177/1073191116656794

### 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)

DOI: 10.1093/jamia/ocv200

## 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

DOI: 10.1176/appi.ps.201500130

### 2014 J01 Tracking Mental Well-Being: Balancing Rich Sensing and Patient Needs

Mark Matthews, SAEED ABDULLAH, Geri Gay, and Tanzeem Choudhury IEEE Computer

DOI: 10.1109/MC.2014.107

### **CONFERENCE PAPERS**

## 2024 C25 Speaking of Health: Leveraging Large Language Models to assess Exercise Motivation and Behavior of Rehabilitation Patients

Suhas BN, Amanda Rebar, and SAEED ABDULLAH INTERSPEECH

DOI: 10.21437/Interspeech.2024-121

## C24 Supportive Fintech for Individuals with Bipolar Disorder: Financial Data Sharing Preferences to Support Longitudinal Care Management

Jeff Brozena<sup>†</sup>, Johnna Blair<sup>†</sup>, Thomas Richardson, Mark Matthews, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH CHI Conference on Human Factors in Computing Systems
Acceptance rate: 26.3% • DOI: 10.1145/3613904.3642645

†: equal contribution

## 2023 C23 Differential Privacy enabled Dementia Classification: An Exploration of the Privacy-Accuracy Trade-off in Speech Signal Data

Suhas BN, Sarah Rajtmajer, and SAEED ABDULLAH INTERSPEECH

DOI: 10.21437/Interspeech.2023-575

# C22 Knowing How Long a Storm Might Last Makes it Easier to Weather: Exploring Needs and Attitudes Toward a Data-driven and Preemptive Intervention System for Bipolar Disorder

Johnna Blair, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH CHI Conference on Human Factors in Computing Systems

Acceptance rate: 28.39% • DOI: 10.1145/3544548.3581563

## Motivation to Use Fitness Application for Improving Physical Activity Among Hispanic Users: The Pivotal Role of Interactivity and Relatedness

Maria Molina, Emily Zhan, Devanshi Agnihotri, SAEED ABDULLAH, and Pallav Deka

CHI Conference on Human Factors in Computing Systems

Acceptance rate: 28.39% • DOI: 10.1145/3544548.3581200

### 2022 C20 Privacy Sensitive Speech Analysis Using Federated Learning To Assess Depression

Suhas BN and SAEED ABDULLAH

The IEEE International Conference on Acoustics, Speech, & Signal Processing (ICASSP)

Acceptance rate: 45% • DOI: 10.1109/ICASSP43922.2022.9746827

## 2021 C19 Assessing effectiveness and interpretability of light behaviors in smart speakers

Sahiti Kunchay and SAEED ABDULLAH

Conversational User Interfaces

Acceptance rate: 29% • DOI: 10.1145/3469595.3469610

## 2020 C18 Alexa as Coach: Leveraging Smart Speakers to Build Social Agents that Reduce Public Speaking Anxiety

Jinping Wang, Hyun Yang, Ruosi Shao, SAEED ABDULLAH, and S. Shyam Sundar

CHI Conference on Human Factors in Computing Systems
Acceptance rate: 24.31% • DOI: 10.1145/3313831.3376561

## ★ C17 Will Deleting History Make Alexa More Trustworthy? Effects of Privacy and Content Customization on User Experience of Smart Speakers

Eugene Cho, S. Shyam Sundar, SAEED ABDULLAH, and Nasim Motalebi CHI Conference on Human Factors in Computing Systems

Acceptance rate: 24.31% • DOI: 10.1145/3313831.3376551 HONORABLE MENTION (TOP 5% OF SUBMISSIONS)

### 2018 C16 AlertnessScanner: What Do Your Pupils Tell About Your Alertness

Vincent Tseng, SAEED ABDULLAH, Jean Costa, and Tanzeem Choudhury Conference on human-computer interaction with mobile devices and services (MobileHCI)

Acceptance rate: 24.5% • DOI: 10.1145/3229434.3229456

## 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% • DOI: 10.1145/3240925.3240959

## 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

Conference on Pervasive and Ubiquitous Computing (UbiComp)

Acceptance rate: 23% • DOI: 10.1145/2971648.2971712

### C13 Shining (Blue) Light on Creative Ability

SAEED ABDULLAH, Mary Czerwinski, Gloria Mark, and Paul Johns Conference on Pervasive and Ubiquitous Computing (UbiComp)

Acceptance rate: 23% • DOI: 10.1145/2971648.2971751

## C12 CrossCheck: Toward passive sensing and detection of mental health changes in people with schizophrenia

Rui Wang, Min Aung, SAEED ABDULLAH, Dror Ben-Zeev, Rachel Brian, Andrew Campbell, Tanzeem Choudhury, Marta Hauser, John Kane, Michael Merrill, Emily Scherer, and Vincent Tseng

Conference on Pervasive and Ubiquitous Computing (UbiComp)

Acceptance rate: 23% • DOI: 10.1145/2971648.2971740

## ★ 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

Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI)

Acceptance rate: 23.5% • DOI: 10.1145/2935334.2935383

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 Conference on Physiological Computing Systems (PhyCS)

DOI: 10.5220/0005952600980104

## 2015 C09 Social (Media) Jet Lag: How Usage of Social Technology Can Modulate and Reflect Circadian Rhythms

Elizabeth Murnane, SAEED ABDULLAH, Mark Matthews, Tanzeem Choudhury, and Geri Gay

Conference on Pervasive and Ubiquitous Computing (UbiComp)

Acceptance rate: 23% • DOI: 10.1145/2750858.2807522

## 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

Conference on Human-Computer Interaction with Mobile Devices and Services (Mobile HCI)

Acceptance rate: 27% • DOI: 10.1145/2785830.2785866

### C07 Collective Smile: Measuring Societal Happiness from Geolocated Images

SAEED ABDULLAH, Elizabeth Murnane, Jean Costa, and Tanzeem Choudhury

Conference on Computer Supported Cooperative Work & Social Computing (CSCW)
Acceptance rate: 28% • DOI: 10.1145/2675133.2675186

## C06 MoodLight: Exploring Personal and Social Implications of Ambient Display of Biosensor Data

Jaime Snyder, Mark Matthews, Jacqueline Chien, Pamara Chang, Emily Sun, SAEED ABDULLAH, and Geri Gay

Conference on Computer Supported Cooperative Work & Social Computing (CSCW)
Acceptance rate: 28% • DOI: 10.1145/2675133.2675191

## 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 Murnane, Geri Gay, and Tanzeem Choudhury

Conference on Pervasive and Ubiquitous Computing (UbiComp)
Acceptance rate: 20% • DOI: 10.1145/2632048.2632100

## 2012 C04 Towards Population Scale Activity Recognition: A Framework for Handling Data Diversity

SAEED ABDULLAH, Nicholas Lane, and Tanzeem Choudhury AAAI Conference on Artificial Intelligence

Acceptance rate: 26% • DOI: 10.5555/2900728.2900849

### 2011 C03 An Epidemic Model for News Spreading on Twitter

SAEED ABDULLAH and Xindong Wu
Conference on Tools with Artificial Intelligence (ICTAI)

Acceptance rate: 23% • DOI: 10.1109/ICTAI.2011.33

## 2009 C02 **Evolving Multilayer Neural Networks using Permutation free Encoding Technique**

Anupam Das and SAEED ABDULLAH Conference on Artificial Intelligence (ICAI)

Acceptance rate: 23%

### 2008 C01 Permutation Free Encoding Technique for Evolving Neural Networks

Anupam Das, Shohrab Hossain, SAEED ABDULLAH, and Rashed Ul Islam International Symposium on Neural Networks (ISNN)

Acceptance rate: 23% • DOI: 10.1007/978-3-540-87732-5 29

### **BOOK CHAPTERS**

### 2025 B03 Technology in Mental Health Work: Challenges and Opportunities

Lauren Moran, Christopher Wiese, Rosa Arriaga, SAEED ABDULLAH, Andrew Sherrill

Human-Technology Partnerships at Work

In press

## 2021 B02 Ubiquitous computing for person-environment research: Opportunities, considerations, and future directions

Sumer Vaid, SAEED ABDULLAH, Edison Thomaz, and Gabriella Harari Measuring and Modeling Persons and Situations

DOI: 10.1016/B978-0-12-819200-9.00020-X

### 2017 B01 Circadian Computing: Sensing, Modeling, and Maintaining Biological Rhythms

SAEED ABDULLAH, Elizabeth Murnane, Mark Matthews, and Tanzeem Choudhury

Mobile Health: Sensors, Analytic Methods, and Applications

DOI: 10.1007/978-3-319-51394-2 3

### WORKSHOP PAPERS & ABSTRACTS

## 2025 W35 Generative AI for Efficient and Empathetic Conversational Models in Mental Health

Suhas BN, Dominik Mattioli, Rosa Arriaga, Christopher Wiese, Andrew Sherrill, and SAEED ABDULLAH

Mid-Atlantic Student Colloquium on Speech, Language and Learning

## W34 Designing Collaborative Fintech: Identifying Care Partner Goals and Challenges for Supporting the Financial Lives of Those with Bipolar Disorder

Hee Jeong Han, Johnna Blair, Jeff Brozena, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH

Future of Money and HCI workshop at CHI Conference on Human Factors in Computing Systems

In press

## W33 Technoskepticism or Justified Caution? The Future of Human-Centered AI in Mental Health Care

Nathaniel Swinger, Lauren Moran, SAEED ABDULLAH, Christopher Wiese, Uichin Lee, Andrew Sherrill, and Rosa Arriaga

Panel at CHI Conference on Human Factors in Computing Systems In press

### W32 Future of Money and HCI

Johnna Blair, Jeff Brozena, John Vines, Jofish Kaye, Mark Matthews, and SAEED

### **ABDULLAH**

Workshop at CHI Conference on Human Factors in Computing Systems In press

## W31 Voice Assistants to Deliver Cognitive Stimulation Therapy for Persons Living with Dementia

Ling Qiu, Ita Saragih, Donna Fick, S. Shyam Sundar, and SAEED ABDULLAH Late-Breaking paper at the CHI Conference on Human Factors in Computing Systems

In press

# W30 Using a Human-Centered AI Approach for Managing Finances in Dementia Johnna Blair, Ling Qiu, and SAEED ABDULLAH AAAI Fall Symposium Series 2024 — AI for Aging in Place

## W29 Aging in Place with Dementia: Can Voice Assistants Help Provide Cognitive Stimulation?

SAEED ABDULLAH, S. Shyam Sundar, Donna Fick, and Ling Qiu AAAI Fall Symposium Series 2024 — AI for Aging in Place

# W28 Teaming with AI to learn and maintain clinical skills in prolonged exposure: Development of TEAMMAIT (Trustworthy, Explainable, and Adaptive Monitoring Machine for AI Teams).

Andrew Sherrill, SAEED ABDULLAH, Rosa Arriaga, and Christopher Wiese Association for Behavioral and Cognitive Therapies (ABCT) Annual Convention

# W27 Using Objective Financial Data in Mental Health Interventions – Supporting Long-Term Stability and Financial Collaboration for Individuals with Bipolar Disorder

Johnna Blair, Jeff Brozena, Thomas Richardson, Mark Matthews, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH Association for Behavioral and Cognitive Therapies (ABCT) Annual Convention

## W26 Designing financial technologies to support individuals with serious mental illnesses

Johnna Blair, Jeff Brozena, Thomas Richardson, Mark Matthews, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH Association for Behavioral and Cognitive Therapies (ABCT) Annual Convention

## W25 Managing Finances for Persons Living with Dementia: Current Practices and Challenges for Care Partners

Ling Qiu<sup>†</sup>, Johnna Blair<sup>†</sup>, and SAEED ABDULLAH Late-Breaking paper at the CHI Conference on Human Factors in Computing Systems Acceptance rate: 33.88% • DOI: 10.1145/3613905.3650809

†: equal contribution

### W24 GAIMPLAY: A Theory-Informed Prompt Engineering Architecture for Personalized Motivational Message Generation to Promote Physical Activity

Sanjana Mendu, Nolan Pye, David Conroy, and SAEED ABDULLAH Designing (with) AI for Wellbeing workshop at the CHI Conference on Human Factors in Computing Systems

### W23 "Learning to Live with Pain": Designing a Voice Assistant to Deliver Mindfulness-Based Stress Reduction Practices for Individuals Living with Chronic Pain

Sebrina Doyle Fosco, Sanjana Mendu, Stephanie Lanza, and SAEED ABDUL-LAH

Annual meeting of the Society for Prevention Research

## W22 Fintech for Psychological and Financial Resilience: Determinants of Financial Data Sharing Behavior for Individuals with Bipolar Disorder

Jeff Brozena, Johnna Blair, Thomas Richardson, Mark Matthews, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH

Designing for and Reflecting upon Resilience in Health and Wellbeing workshop at DIS

# W21 Designing to Support Longitudinal Financial Management and Resilience for Persons Living with Dementia and their Care Partners: Identifying User Needs and Challenges

Ling Qiu, SAEED ABDULLAH

Designing for and Reflecting upon Resilience in Health and Wellbeing workshop at DIS

### W20 Designing for and Reflecting upon Resilience in Health and Wellbeing

Xinning Gui, Yuhan Luo, Xianghua Sharon Ding, SAEED ABDULLAH, Emma Dixon, Shaowen Bardzell

Designing Interactive Systems (DIS)

DOI: 10.1145/3563703.3591456

## W19 Supportive Data-Driven Financial Technologies for Individuals with Serious Mental Illnesses

Johnna Blair, Jeff Brozena, Mark Matthews, Thomas Richardson, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH

WISH Symposium at CHI Conference on Human Factors in Computing Systems In press

## W18 Impulsive Spending and Finance Management in Bipolar Disorder: Technology as both a Problem and Potential Solution

Thomas Richardson, Johnna Blair, Jeff Brozena, Mark Matthews, Dahlia Mukherjee, Erika Saunders, and SAEED ABDULLAH

Annual Conference of the International Society for Bipolar Disorders

### W17 Automatic Classification of Dementia Using Text and Speech Data

Hee Jeong Han, Suhas B. N., Ling Qiu, and SAEED ABDULLAH *Multimodal AI in Healthcare. Studies in Computational Intelligence* DOI: 10.1007/978-3-031-14771-5 29

## 2022 W16 Comparing Two Delivery Modes Of A Supportive Care Platform For Metastatic Breast Cancer Patients

Brett Gordon, SAEED ABDULLAH, Shawna Doerksen, Abigail Lorenzo, Bethany Kanski, Ling Qiu, Kathryn Schmitz

Medicine & Science in Sports & Exercise

DOI: 10.1249/01.mss.0000879068.43957.d0

## 2021 W15 **PTSDialogue: Designing a Conversational Agent to Support Individuals with Post-Traumatic Stress Disorder**

Hee Jeong Han, Sanjana Mendu, Beth K Jaworski, Jason E Owen, and SAEED ABDULLAH

Mental health: Sensing & Intervention (MHSI) workshop at UbiComp

DOI: 10.1145/3460418.3479332

### W14 Voice Assistants for Speech Therapy

Ling Qiu and SAEED ABDULLAH

Mental health: Sensing & Intervention (MHSI) workshop at UbiComp

DOI: 10.1145/3460418.3479336

## W13 Nurse AMIE: Using Smart Speakers to Provide Supportive Care Intervention for Women with Metastatic Breast Cancer

Ling Qiu, Bethany Kanski, Shawna Doerksen, Renate Winkels, Kathryn H.Schmitz, and SAEED ABDULLAH

Late-Breaking paper at the CHI Conference on Human Factors in Computing Systems

Acceptance rate: 39% • DOI: 10.1145/3411763.3451827

## W12 Using Tweets to Assess Mental Well-being of Essential Workers During the COVID-19 Pandemic

Johnna Blair, Chi-Yang Hsu, Ling Qiu, Shih-Hong Huang, Ting-Hao (Kenneth) Huang, and SAEED ABDULLAH

Late-Breaking paper at the CHI Conference on Human Factors in Computing Systems

Acceptance rate: 39% • DOI: 10.1145/3411763.3451612

### W11 Context-Specific Usability Measures for Voice Assistants

Sanjana Mendu, S. Shyam Sundar, and SAEED ABDULLAH "Let's Talk About CUIs: Putting Conversational User Interface Design Into Practice" workshop at the CHI Conference on Human Factors in Computing Systems

## 2020 W10 Opportunities for Collaborative Clinical Work: Predicting Relapse Onset in Bipolar Disorder from Online Behavior

Johnna Blair, Erika Saunders, Dahlia Mukherjee, and SAEED ABDULLAH Pervasive Health

DOI: 10.1145/3421937.3421947

## W09 WatchOver: using Apple watches to assess and predict substance co-use in young adults

Sahiti Kunchay and SAEED ABDULLAH Mental health: Sensing & Intervention (MHSI) workshop at UbiComp

DOI: 10.1145/3410530.3414373

### 2019 W08 Investigating Users' Perceptions of Light Behaviors in Smart-Speakers

Sahiti Kunchay, Shan Wang, and SAEED ABDULLAH Conference on Computer Supported Cooperative Work & Social Computing (CSCW) DOI: 10.1145/3311957.3359479

## W07 Can Alexa be your Therapist? How Back-Channeling Transforms Smart-Speakers to be Active Listeners

Nasim Motalebi, Eugene Cho, S Shyam Sundar, and SAEED ABDULLAH Conference on Computer Supported Cooperative Work & Social Computing (CSCW) DOI: 10.1145/3311957.3359502

## W06 Understanding the Needs and Challenges of Using Conversational Agents for Deaf Older Adults

Johnna Blair and SAEED ABDULLAH Conference on Computer Supported Cooperative Work & Social Computing (CSCW) DOI: 10.1145/3311957.3359487

### 2018 W05 Conversational agents to provide couple therapy for patients with PTSD

Nasim Motalebi and SAEED ABDULLAH

WellBeCoach: Smart Coaching Solutions for Health & Wellbeing workshop at Pervasive Health

DOI: 10.1145/3240925.3240933

### W04 Supporting Constructive Mental Health Discourse in Social Media

Johnna Blair and SAEED ABDULLAH Design4Diversity workshop at Pervasive Health

DOI: 10.1145/3240925.3240930

## 2016 W03 Assessing mental health issues on college campuses: preliminary findings from a pilot study

Vincent Tseng, SAEED ABDULLAH, Michael Merrill, Min Aung, Franziska Wittleder, and Tanzeem Choudhury

Mental health: Sensing & Intervention (MHSI) workshop at UbiComp

DOI: 10.1145/2968219.2968308

## 2015 W02 Towards circadian computing: a sensing & intervention framework for body clock friendly technology

SAEED ABDULLAH

Doctoral Colloquium at UbiComp DOI: 10.1145/2800835.2801657

### W01 Biological rhythms and technology

Mark Matthews, Erin Carroll, SAEED ABDULLAH, Jaime Snyder, Matthew Kay, Tanzeem Choudhury, Geri Gay, Julie Kientz

CHI Conference on Human Factors in Computing Systems

DOI: 10.1145/2559206.2559230

### POSTERS & DEMOS

## 2023 P13 **Development of a Voice Interface to Support Mindfulness Practice for Individuals with Chronic Pain**

Sanjana Mendu, Sebrina Doyle Fosco, Stephanie Lanza, and SAEED ABDUL-

Consortium on Substance Use and Addiction (CSUA) Annual Conference

### 2022 P12 Dementia Diagnosis using Text and Speech Data

Hee Jeong Han, Suhas BN, Ling Qiu, and SAEED ABDULLAH ICDS Fall 2022 Symposium: Data Science, AI, and a Sustainable, Resilient, and Equitable Future

## P11 ACOUSTICS: Automatic classification of subjects with dementia and healthy controls using text transcriptions and speech data

Hee Jeong Han, Suhas BN, Ling Qiu, and SAEED ABDULLAH Health Intelligence (W3PHIAI-22) Workshop at the AAAI Conference on Artificial Intelligence

# 2015 P10 **Automatic detection of social rhythms in bipolar disorder via smartphone**Ellen Frank, SAEED ABDULLAH, Mark Matthews, and Tanzeem Choudhury American College of Neuropsychopharmacology (ACNP)

## P09 Circadian Computing: Towards bodyclock friendly technology SAEED ABDULLAH

Human Computer Interaction Consortium Workshop (HCIC)

### P08 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 P07 Towards circadian computing: "early to bed and early to rise" makes some of us unhealthy and sleep deprived

SAEED ABDULLAH, Mark Matthews, Elizabeth Murnane, Geri Gay, and Tanzeem Choudhury

Intel Science and Technology Center for Pervasive Computing (ISTC-PC)

### P06 Circadian Computing: Towards bodyclock friendly technology

SAEED ABDULLAH

Human Computer Interaction Consortium Workshop (HCIC)

## 2013 P05 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)

### 2013 P04 Light, color, affect, and stress

Jaime Snyder, Mark Matthews, SAEED ABDULLAH, Yohan Ko, and Geri Gay Society for Social Studies of Science (4S)

### P03 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 at UbiComp

### P02 Clockwise: inferring chronotype and daily patterns from smartphone use

SAEED ABDULLAH

Doctoral Colloquium at 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**

### 2025 Human Centered Artificial Intelligence (HCAI)

College of Information Sciences and Technology, Penn State Developed syllabus, designed instruction material

### 2021 - HCDD 340: Human-Centered Design for Mobile Computing

College of Information Sciences and Technology, Penn State
Co-designed curriculum, developed syllabus, designed instruction material

### 2018 – 2024 IST 525: Computer Supported Cooperative Work (CSCW)

College of Information Sciences and Technology, Penn State Developed syllabus, designed instruction material

### 2019 - 2021 IST 331: Foundations of Human-Centered Design

College of Information Sciences and Technology, Penn State Developed syllabus, designed instruction material

### 2017 - 2018 IST 597: Computational Health: Sensing and Intervention Design

College of Information Sciences and Technology, Penn State Developed syllabus, designed instruction material

### 2014 - 2016 Info 4120/6120: Ubiquitous Computing

Department of Information Science, Cornell University. Instructor: Tanzeem Choudhury

Delivered a guest lecture on Circadian Computing and led a lab session on mobile programming

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

Department of Information Science, Cornell University. Instructor: Carl Lagoze. Led lab teaching sections and covered some lectures

### Fall, 2012 CS 4300: Information retrieval

Department of Information Science, Cornell University. Instructor: Paul Ginsberg. Tutored students and graded assignments

### Spring, 2011 CS 224: Algorithm design & analysis

*University of Vermont. Instructor: Byung Lee* Covered some lectures, tutored students, and marked assignments

### Fall, 2010 CS 32: Puzzles, games and algorithms

*University of Vermont. Instructor: Robert Snapp* Led lab sessions and marked assignments

### CS 204: Database system

University of Vermont. Instructor: Byung Lee

Covered some lectures, tutored students, and marked assignments

### Spring, 2010 **CS 222: Computer architecture**

University of Vermont. Instructor: Alan Ling Tutored students and marked assignments

### CS 195: Computer science for geo-spatial technologies

Instructor: Alison Pechenick

Developed and marked assignments

### Fall, 2009 CS 201: Operating systems

University of Vermont. Instructor: Alan Ling

Covered some lectures, tutored students, and marked assignments

### CS 243: Theory of computation

University of Vermont. Instructor: Alan Ling Tutored students and marked assignments

### RESEARCH SUPPORT

# 2025 - 2030 DeepStroke+: An Advanced Mobile AI Diagnostic Tool for Fast and Precise Detection of Acute Strokes in Mobile Stroke Units, Emergency Rooms, and Telestroke Triage

Co-Investigator

National Institute of Neurological Disorders and Stroke, (\$1,557,560)

## 2024 - 2029 Penn State Roybal Center for Promoting Adherence to Behavior Change and Enhancing Cognitive Function

Co-Investigator

National Institute on Aging, (\$5,698,199)

### 2024 - 2026 Voice Assistant to Provide Cognitive Stimulation Therapy at Scale

**Principal Investigator** 

National Institute on Aging, (\$432,198)

# 2023 - 2027 Collaborative Research: FW-HTF-RL: Understanding the Ethics, Development, Design, and Integration of Artificial Intelligence Teammates in Future Mental Health Work

Principal Investigator at Penn State

National Science Foundation (total: \$1,999,957; at Penn State: \$650,000)

## 2023 - 2025 Financial Activity Data as an Objective Behavioral Marker in Bipolar Disorder: A Feasibility and Acceptance Study

Principal Investigator

National Institute of Mental Health (\$484,966)

## 2022 - 2024 Financial Wellbeing for Individuals Living with Mental Illnesses: Toward a Privacy-preserving and Data-driven Intervention Platform

Principal Investigator

Social Science Research Institute (SSRI), Penn State (\$75,000)

## 2019 - 2023 CRII:SCH: Designing for Supportive Accountability: Using Conversational Agents to Sustain Patient Engagement in PTSD

Principal Investigator

National Science Foundation (\$174, 818)

### 2019 - 2021 Nurse AMIE (Addressing Metastatic Individuals Everyday)

Co-Investigator

American Institute for Cancer Research (\$165,000)

## 2018 - 2021 A Real-Time Mindfulness Intervention to Control Pain: Delivery Through a Conversational Agent

Principal Investigator

Social Science Research Institute (SSRI), Penn State (\$20, 000)

### 2018 - 2021 Predicting Relapse Onset in Bipolar Disorder from Online Behavioral Data

Principal Investigator

*Institute for CyberScience (ICS), Penn State (\$37, 500)* 

## 2019 – 2020 Watch Over: Using Apple Watches to Assess and Predict Substance Co-use in Young Adults

Principal Investigator

College of Information Sciences and Technology, Penn State (\$53, 260)

## 2018 - 2019 Talking to Machines: Virtual Conversational Agents for Effective Treatment Delivery in PTSD

Principal Investigator

College of Information Sciences and Technology, Penn State (\$56, 310)

### **AWARDS**

### 2023 Dean's Circle of Teaching Excellence

College of Information Sciences and Technology, Penn State

This award recognizes "contributions to our teaching mission based on a broad

definition of teaching which includes classroom teaching, mentoring of students, curriculum development, and other teaching related activities."

### 2021 SIGCHI Development Award

**ACM SIGCHI** 

This award (\$3050) focused on improving inclusivity and diversity in Ubi-Comp and ISWC conference. I developed the proposal as a scholarship cochair of the conference.

### 2020 Honorable Mention

CHI Conference on Human Factors in Computing Systems

For the paper: "Will Deleting History Make Alexa More Trustworthy? Effects of Privacy and Content Customization on User Experience of Smart Speakers"

### Distinguished Master's Thesis Award

Graduate School, Penn State

Awarded to Shan Wang (my advisee) for "excellence in master's level thesis research". Her thesis title is: "Effects of Prompt Humor Level on Behavioral Intention and Perceived Interruption: An Online Survey Study".

### 2019 Junior Faculty Excellence Award in Research

College of Information Sciences and Technology, Penn State

This award recognizes "innovative and outstanding research results, contributed to breakthrough and high impact research, or demonstrated the potential to solve challenging research problems".

### 2018 Tronzo Medical Informatics Endowment

College of Information Sciences and Technology, Penn State

The endowment supports research on issues and technologies related to medical informatics.

### 2016 - Special recognition for outstanding reviews

CHI 2021

CHI 2020

IMWUT (February 2020)

IMWUT (November 2019)

IMWUT (May 2017 round)

UbiComp 2016

### 2016 Best Paper Award

Conference on human-computer interaction with mobile devices and services (Mobile HCI)

For the paper: Mobile manifestations of alertness: Connecting biological rhythms with patterns of smartphone app use.

### **Agile Research Grant**

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

Heritage Provider Network, Open mHealth, and the University of California, Los Angeles

Our MoodRhythm project focusing on bipolar disorder won the Heritage Open mHealth Challenge.

### **INVITED TALKS**

## Write On: Opportunities and Challenges in using Generative AI for Health Intervention Messaging

BRiTE Center, University of Washington

## Write On: Opportunities and Challenges in using Generative AI for Health Intervention Messaging

Closing keynote at annual conference, UConn Center for mHealth and Social Media

**Building Better Digital Health: A Data-Driven and Human-Centered Approach** *Millennium Café, Penn State* 

## 2023 Talking to Machines: Designing Conversational Agents to Support Health Intervention

SPSP Psychology of Media and Technology preconference

2021 **Talking to Machines: Leveraging Voice Interfaces for Intervention Delivery**Center for Behavioral Health and Technology, University of Virginia

## "It Didn't Sound Good with My Cochlear Implants": Understanding the Challenges of Using Smart Assistants for Deaf and Hard of Hearing Users

Johnna Blair and SAEED ABDULLAH

National Educational Conference, Canadian Hard of Hearing Association

## 2020 Designing for Supportive Accountability: Using Conversational Agents to Sustain Patient Engagement in Post-traumatic stress disorder (PTSD)

Advancing Health through Science Smart and Connected Health (SCH) Principal Investigator Meeting, National Science Foundation

## 2019 Computational Health: Using HCI & Data Science Methods to Improve Health and Wellbeing

Dean's Advisory Board, College of Information Sciences and Technology, Penn State

## "Alexa, I am in Pain!": A Real-Time Mindfulness Intervention for Chronic Pain Management Using Conversational Agents

Prevention Research Center (PRC) Day, College of Health and Human Development, Penn State

### 2018 Your phone usage reveals a lot about you: Inferring sleep and circadian disruptions from phone use patterns

QuantDev Brownbag Series, College of Health and Human Development, Penn State

**Talking to Machines: Conversational Agents for Mental Health Care**Colloquium at UT Austin iSchool

### Talking to Machines: Conversational Agents for Mental Health Care

Grand Rounds Series, Department of Psychology at Penn State

## 2016 Passive sensing of circadian rhythms for individualized models of cognitive performance

Health Data Exploration Project Agile Grant Series

## 2015 Cognitive rhythms: unobtrusive and continuous sensing of alertness using a mobile phone

*Intel Science & Technology Center for Pervasive Computing (ISTC-PC)* 

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

### PROFESSIONAL EXPERIENCE

### 2012 - 2017 Graduate Research Assistant

Department of Information Science, Cornell University. Supervisor: Tanzeem Choudhury

### Fall, 2015 Research Intern

Microsoft Research. Supervisor: Mary Czerwinski
Designed and developed novel system for improving creative ability

### 2011 - 2012 Graduate Teaching Assistant

Department of Information Science, Cornell University

### 2009 - 2011 Graduate Teaching Assistant

**University of Vermont** 

### **Software Developer** 2008 - 2009

AfriGIS Ltd

Developing search engine with special focus on geographic relevance

### **Software Developer** 2008

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

### **EDITORIAL RESPONSIBILITIES**

### 2022 **Topic Editor**

Frontiers Research Topic: "Factors Influencing User Engagement with Digital Mental Health Interventions"

### **Topic Editor** 2021

Frontiers Research Topic: "Quantitative Modeling of Psychopathology Using Passively Collected Data"

#### **Associate Editor** 2017 - 2020

Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)

#### **Co-Editor** 2018

Special Issue of JMIR on Computing and Mental Health

### CONFERENCE & WORKSHOP ORGANIZER

### Workshop on "Mental health and well-being: Sensing and intervention" 2016 -Conference on Pervasive and Ubiquitous Computing (UbiComp)

### 2023 Designing for and Reflecting upon Resilience in Health and Wellbeing

Designing Interactive Systems (DIS)

2022	Computer Supported Cooperative Work & Social Computing (CSCW)		
2021	Scholarship co-chair Conference on Pervasive and Ubiquitous Computing (UbiComp)		
2019	Publicity co-chair Conference on Pervasive and Ubiquitous Computing (UbiComp)		
2014	Workshop on "Biological rhythms and technology" CHI Conference on Human Factors in Computing Systems		
	PROGRAM COMMITTEE MEMBER		
2016 -	Workshop on "Mental health and well-being: Sensing and intervention" Conference on Pervasive and Ubiquitous Computing (UbiComp)		
2017 - 2020	<b>Pervasive Health</b> <i>EAI International Conference on Pervasive Computing Technologies for Healthcar</i>		
2015 - 2018	International Conference on Digital Health		
2017	Workshop on "Tools and Algorithms for Mental Health and Wellbeing, Pain and Distress (MHWPD)"  Affective Computing and Intelligent Interaction (ACII)		
	ACADEMIC SERVICES		
2022 - 2023	<b>Faculty Search Committee (Human-Centered Artificial Intelligence track)</b> College of Information Sciences and Technology, Penn State		
2023	HCI Faculty Annual Evaluation Committee member College of Information Sciences and Technology, Penn State		
2021 - 2022	Chair of the Faculty Search Committee (Accessibility track) College of Information Sciences and Technology, Penn State		
2020 - 2022	Academic Integrity Committee College of Information Sciences and Technology, Penn State		

### 2019 - **Advisory Board Member**

Penn State SELF (Student Engagement, Learning, and Flourishing) project

### 2017 - Governing Board Member

Human Computer Interaction Consortium (HCIC)

### 2017 - Faculty advisory committee focusing on IT support for research

College of Information Sciences and Technology, Penn State

### 2018 – 2020 Faculty Search Committee (HCD track)

College of Information Sciences and Technology, Penn State

### **Graduate Recruiting Committee**

College of Information Sciences and Technology, Penn State

### 2020 Application Reviewer

Nittany AI Challenge, Penn State

### 2017 Application Reviewer

Schreyer Honors College, Penn State

### **Applicant Interviewer**

Millennium Scholars program, Penn State

### 2015 **Student Volunteer**

Program committee meeting for Conference on Pervasive and Ubiquitous Computing (UbiComp)

### 2013 – 2015 **Student Representative**

Faculty Search Committee, Department of Information Science, Cornell University

### 2011 - 2013 Colloquium Organizer

Department of Information Science, Cornell University

### 2011 - 2012 Computing facilities support

Department of Information Science, Cornell University