Saeed Abdullah

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**

Selected Awards & Honors

2025	**NIH grant for acute stroke detection (Co-I)**
	Best Poster Award at MASC-SLL 2025
2024	**NIH P30 grant to design health interventions (Co-I)**
	NIA R21 grant to support dementia care (PI)
2023	**NSF grant to improve mental health worker training (Co-PI)**
	NIMH R21 grant on financial behaviors in bipolar disorder (PI)
	IST Dean's Circle of Teaching Excellence
2020	**Honorable Mention at CHI (top 5%)**
2019	**NSF grant on conversational agents for self-management in PTSD (PI)**
	IST Junior Faculty Excellence Award in Research
2018	**Tronzo Medical Informatics Endowment**
2016	**Best Paper Award at MobileHCI (top 1%)**

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

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 exoskeleton-based virtual exercise coach**
Raju Maharjan, Sanjana Mendu, Milton Mariani, Saeed Abdullah, and John Hansen
DIGITAL HEALTH
DOI: 10.1177/20552076241302652

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

2023   J19   **Designing voice interfaces to support mindfulness-based pain management**
Sanjana Mendu, Sebrina Doyle Fosco, Stephanie Lanza, and Saeed Abdullah
DIGITAL HEALTH

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

J17   **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

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

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

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

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   **J09**   **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 Technologies (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 Applications**

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[†], Johnna Blair[†], 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

C21 **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 (MobileHCI)
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 (MobileHCI)
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**

Sᴀᴇᴇᴅ Aʙᴅᴜʟʟᴀʜ, Elizabeth Murnane, Mark Matthews, and Tanzeem Choudhury
Mobile Health: Sensors, Analytic Methods, and Applications
DOI: [10.1007/978-3-319-51394-2_3](10.1007/978-3-319-51394-2_3)

Wᴏʀᴋsʜᴏᴘ ᴘᴀᴘᴇʀs & ᴀʙsᴛʀᴀᴄᴛs

2025 **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 Sᴀᴇᴇᴅ Aʙᴅᴜʟʟᴀʜ
Future of Money and HCI workshop at CHI Conference on Human Factors in Computing Systems

W33 **Technoskepticism or Justified Caution? The Future of Human-Centered AI in Mental Health Care**
Nathaniel Swinger, Lauren Moran, Sᴀᴇᴇᴅ Aʙᴅᴜʟʟᴀʜ, Christopher Wiese, Uichin Lee, Andrew Sherrill, and Rosa Arriaga
Panel at CHI Conference on Human Factors in Computing Systems
DOI: [10.1145/3706599.3716286](10.1145/3706599.3716286)

W32 **Future of Money and HCI**
Johnna Blair, Jeff Brozena, John Vines, Jofish Kaye, Mark Matthews, and Sᴀᴇᴇᴅ Aʙᴅᴜʟʟᴀʜ
Workshop at CHI Conference on Human Factors in Computing Systems
Acceptance rate: 25% • DOI: [10.1145/3706599.3706711](10.1145/3706599.3706711)

W31 **Voice Assistants to Deliver Cognitive Stimulation Therapy for Persons Living with Dementia**
Ling Qiu, Ita Saragih, Donna Fick, S. Shyam Sundar, and Sᴀᴇᴇᴅ Aʙᴅᴜʟʟᴀʜ
Late-Breaking paper at the CHI Conference on Human Factors in Computing Systems
Acceptance rate: 33.9% • DOI: [10.1145/3706599.3719707](10.1145/3706599.3719707)

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

W29 **Aging in Place with Dementia: Can Voice Assistants Help Provide Cognitive Stimulation?**
Sᴀᴇᴇᴅ Aʙᴅᴜʟʟᴀʜ, 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[†], Johnna Blair[†], 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 Abdullah
Annual meeting of the Society for Prevention Research

2023 **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

Designing Interactive Systems Conference (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 Designing Interactive Systems Conference (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 Conference (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)

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)

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)

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

W04   **Supporting Constructive Mental Health Discourse in Social Media**
Johnna Blair and SAEED ABDULLAH
Design4Diversity workshop at Pervasive Health

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

2015   **W02**   **Towards circadian computing: a sensing & intervention framework for body clock friendly technology**
SAEED ABDULLAH
Doctoral Colloquium at UbiComp

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

2025 ★ P16 **Generative AI for Efficient and Empathetic Conversational Models in Mental Health**
Suhas BN, Dominik Mattioli, Rosa Arriaga, Christopher Wiese, Andrew Sherrill, and Saeed Abdullah
Penn State AI Week 2025
3rd best poster award

P15 **Generative AI for Clinician-Supported Exposure Therapy: Toward Personalized Script and Image Generation**
Sam Moradzadeh and Saeed Abdullah
Penn State AI Week 2025

★ P14 **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 (MASC-SLL 2025)
Best poster award

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 Abdullah
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)

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

2025 **Best Poster Award**
Mid-Atlantic Student Colloquium on Speech, Language and Learning (MASC-SLL

2025)
For the poster "Generative AI for Efficient and Empathetic Conversational Models in Mental Health" (out of 62 posters).

3rd Best Poster Award
Penn State AI Week 2025
For the poster "Generative AI for Efficient and Empathetic Conversational Models in Mental Health" (out of 80+ posters).

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 co-chair 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 (MobileHCI)* 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

2024	**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

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

Editorial Responsibilities

2022 **Topic Editor**
Frontiers Research Topic: "Factors Influencing User Engagement with Digital Mental Health Interventions"

2021 **Topic Editor**
Frontiers Research Topic: "Quantitative Modeling of Psychopathology Using Passively Collected Data"

2017 – 2020 **Associate Editor**
Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)

2018 **Co-Editor**
Special Issue of JMIR on Computing and Mental Health

2025 **Workshop on "the Future of Money and HCI"**
CHI Conference on Human Factors in Computing Systems

Panel on "Technoskepticism or Justified Caution? The Future of Human-Centered AI in Mental Health Care"
CHI Conference on Human Factors in Computing Systems

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

2023 **Designing for and Reflecting upon Resilience in Health and Wellbeing**
Designing Interactive Systems (DIS)

2022 **Award & Recognition Committee member**
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 **Pervasive Health**
EAI International Conference on Pervasive Computing Technologies for Healthcare

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)

2024 – 2025 **Chair of the Faculty Search Committee (Human-Centered Artificial Intelligence track)**
College of Information Sciences and Technology, Penn State

2022 – 2023 **Faculty Search Committee (Human-Centered Artificial Intelligence track)**
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*