

SAEED ABDULLAH

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RESEARCH INTEREST

My work, on a broader scale, focuses on providing technology mediated care in the context of mental health. In this new model of care, the goal is to detect early warning signs and provide intervention even before the relapse happens — moving from reactive to preemptive care.

Towards that, I have designed, developed and deployed smartphone based sensing systems for **Bipolar** and **Schizophrenic** patients. I am also interested in enabling **circadian stability** in general population.

EDUCATION

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| <i>PhD Student</i> | 2011 – Information Science Committee: Tanzeem Choudhury (Chair), Geri Gay and Deborah Estrin | CORNELL UNIVERSITY, ITHACA, NY |
| <i>Master of Science</i> | 2011 – 2014 Information Science GPA: 3.86 · Adviser: Tanzeem Choudhury | CORNELL UNIVERSITY, ITHACA, NY |
| <i>Master of Science</i> | 2009 – 2011 Computer Science GPA: 4.00 · Adviser: Xindong Wu Worked on modeling information diffusion on Twitter using mathematical epidemiology theories. | UNIVERSITY OF VERMONT, BURLINGTON, VT |
| <i>Bachelor of Science</i> | 2003 – 2007 Bangladesh University of Engineering & Technology (BUET) Computer Science & Engineering GPA: 3.79 · Advisers: Dr Monirul Islam and Shohrab Hossain Thesis Topic: Evolution of Neural Network using Genetic Algorithm | BUET, DHAKA |

WORK EXPERIENCE

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| <i>Graduate Researcher</i> | 2012 – Designing, developing and deploying smartphone based sensing systems in the context of mental health. | CORNELL UNIVERSITY |
| <i>Research Intern</i> | 2015, Fall I developed and deployed novel interventions to improve creative ability. My mentor was Mary Czerwinski, VIBE group. | MICROSOFT RESEARCH |
| <i>Graduate Teaching Assistant</i> | 2011 – 2012 Teaching and grading for CS4300: <i>Information Retrieval</i> and CS/INFO 2300: <i>Intermediate Design and Programming for the Web</i> . Guest lecture on special topics for INFO 4120/6120: <i>Ubiquitous Computing</i> . | CORNELL UNIVERSITY |

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| <i>Graduate Teaching Assistant</i> | 2009 – 2011 UNIVERSITY OF VERMONT Teaching and grading for CS 201: <i>Operating Systems</i> , CS 32: <i>Puzzles, Games & Algorithms</i> , CS 222: <i>Computer Architecture</i> , CS224: <i>Algorithm Design and Analysis</i> , CS 195: <i>Computer Science for Geo-spatial Technologies</i> , CS 204: <i>Database Systems</i> |
| <i>Software Developer</i> | 2008 – 2009 AFRIGIS LTD, DHAKA, BANGLADESH Developing search engine with special focus on geographic relevance for subscribers of Vodacom, South Africa. |
| <i>Google Summer of Code</i> | 2008 Summer GOOGLE SUMMER OF CODE Worked on a Just-In-Time (JIT) compiler for Java to provide instruction selection and code emission for array manipulation bytecodes. |

SERVICE

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| <i>Student Representative</i> | 2011 – CORNELL UNIVERSITY Faculty Hiring Committee (2013 – 2015) Computing Facilities Support (2011 – 2013) Colloquium Organizer (2011 – 2012) |
| <i>Reviewer</i> | CHI (2014 – 2016) UbiComp (2014 – 2016) PervasiveHealth, 2015 IEEE Transactions on Knowledge and Data Engineering Behavior Research Methods Journal |
| <i>Organizer</i> | PROGRAM COMMITTEE MEMBER 5th International Conference on Digital Health, 2015 WORKSHOP ORGANIZER Biological Rhythms and Technology, CHI, 2014 |

AWARDS

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| <i>Heritage Open mHealth Challenge Winner</i> | 2013 Summer \$100,000 HERITAGE OPEN mHEALTH CHALLENGE Our MoodRhythm project focusing on Bipolar patients won Heritage Open mHealth Challenge co-sponsored by Heritage Provider Network, Open mHealth, and the University of California, Los Angeles. |
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PRESENTATIONS

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| <i>ISTC-PC</i> | 2014 Summer ISTC-PC Intel Science and Technology Center for Pervasive Computing (ISTC-PC) Presentation title: Towards Circadian Computing: “Early to Bed and Early to Rise” Makes Some of Us Unhealthy and Sleep Deprived |
| <i>HCIC</i> | 2014 Summer HUMAN COMPUTER INTERACTION CONSORTIUM Human Computer Interaction Consortium (HCIC) Booster title: Circadian computing: Towards bodyclock friendly technology |

Health Hackathon
hosted by WebMD

2014 Spring MIT & CORNELL HACKING-MEDICINE HACKATHON

Selected to participate in MIT & Cornell Health focused Hackathon hosted by WebMD. Worked on Smartphone app that supports individuals with Bipolar Disorder to establish daily routine

ISTC-PC 2012 Summer ISTC-PC

Intel Science and Technology Center for Pervasive Computing (ISTC-PC)
Poster title: Towards Population Scale Activity Recognition: A Scalable Framework for Handling Data Diversity

PUBLICATIONS

2016

Saeed Abdullah, Elizabeth L. Murnane, Mark Matthews and Tanzeem Choudhury. **Circadian Computing: Sensing, Modeling, and Maintaining Biological Rhythms**. Book chapter. *In Press*

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. **Semi-Automated Tracking: A Balanced Approach for Self-Monitoring Applications**. IEEE Pervasive. *In Press*.

2015

Saeed Abdullah, Mark Matthews, Ellen Frank, Gavin Doherty, Geri Gay, Tanzeem Choudhury. **Automatic detection of social rhythms in Bipolar Disorder**. Journal of the American Medical Informatics Association.

Dror Ben-Zeev, Rui Wang, Saeed Abdullah, Rachel Brian, Emily Scherer, Lisa Mistler, Marta Hauser, John Kane, Andrew Campbell, Tanzeem Choudhury. **Mobile Behavioral Sensing in Outpatients and Inpatients with Schizophrenia**. Psychiatric Services.

Saeed Abdullah. **Towards circadian computing: a sensing & intervention framework for BodyClock friendly technology**. In Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2015 ACM International Symposium on Wearable Computers, pp. 515-520. ACM, 2015.

Ellen Frank, Saeed Abdullah, Mark Matthews, Tanzeem Choudhury. **Automatic Detection of Social Rhythms in Bipolar Disorder via Smartphone**. Poster presented at American College of Neuropsychopharmacology (ACNP).

Elizabeth L. Murnane, Saeed Abdullah, Mark Matthews, Tanzeem Choudhury, and Geri Gay. **Social (media) jet lag: How usage of social technology can modulate and reflect circadian rhythms**. In Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing, pp. 843-854. ACM, 2015.

Mark Matthews, Stephen Volda, Saeed Abdullah, Gavin Doherty, Tanzeem Choudhury, Sangha Im, and Geri Gay. **In Situ Design for Mental Illness: Considering the Pathology of Bipolar Disorder in mHealth Design**. In Proceedings of the 17th International Conference on Human-Computer Interaction with Mobile Devices and Services, pp. 86-97. ACM, 2015.

Saeed Abdullah, Elizabeth L. Murnane, Jean MR Costa, and Tanzeem Choudhury. **Collective Smile: Measuring Societal Happiness from Geolocated Images**. In Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing, pp. 361-374. ACM, 2015.

- Jaime Snyder, Mark Matthews, Jacqueline Chien, Pamara F. Chang, Emily Sun, Saeed Abdullah, and Geri Gay. **MoodLight: Exploring Personal and Social Implications of Ambient Display of Biosensor Data**. In Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing, pp. 143-153. ACM, 2015.
- 2014 Saeed Abdullah, Mark Matthews, Elizabeth L. Murnane, Geri Gay, and Tanzeem Choudhury. **Towards Circadian Computing: Early to Bed and Early to Rise Makes Some of Us Unhealthy and Sleep Deprived**. The 2014 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2014).
- Mark Matthews, Saeed Abdullah, Geri Gay, and Tanzeem Choudhury. **Tracking Mental Well-Being: Balancing Rich Sensing and Patient Needs**. Computer, 47.4(2014). IEEE Computer Society.
- 2013 Saeed Abdullah. **Clockwise: Inferring Chronotype and Daily Patterns from Smartphone Use**. Extended abstract presented in Doctoral School, UbiComp 2013.
- Snyder, J., Matthew, M., Saeed Abdullah, Chien, J., Sun, E., Gay, G. **Light, Color, Affect, and Stress**. Annual Meeting of the Society for Social Studies of Science (4S), San Diego, CA, October 2013.
- Frank, E, Matthews, M., Choudhury, T., Volda, S. & Saeed Abdullah **Developing a Smart Phone App to Monitor Mood, Social Rhythms, Sleep and Social Activity: Technology to Support Effective Management of Bipolar Disorder**. Accepted Poster to American College of Neuropsychopharmacology.
- Volda, S., Matthews, M., Saeed Abdullah, Chi, M., Green, M., Jang, W.J., Hu, D., Weinrich, J., Patil, P., Rabbi, M., Rahman, T., Gay, G., Frank, E. & Choudhury, T. **MoodRhythm: Tracking and supporting daily rhythms**. Interactive demonstration presented UbiComp, 2013.
- 2012 Saeed Abdullah, Nicholas Lane, and Tanzeem Choudhury. **Towards Population Scale Activity Recognition: A Scalable Framework for Handling Data Diversity**. Appears in the Proceedings of AAAI 2012.
- 2011 Saeed Abdullah, and Xindong Wu. **An epidemic model for news spreading on twitter**. 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2011.
- 2009 Anupam Das and Saeed Abdullah. **Evolving Multilayer Neural Networks using Permutation free Encoding Technique**. In Proceedings of the 2009 International Conference on Artificial Intelligence (ICAI, 2009)
- 2008 Anupam Das, Md. Shohrab Hossain, Saeed Abdullah, and Rashed Ul Islam. **Permutation Free Encoding Technique for Evolving Neural Networks**. In Proceedings of the 5th international symposium on Neural Networks: Advances in Neural Networks (ISNN, 2008)