



RAWAN ALHARBI | Curriculum Vitae

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Research Interests

The main goal of my research is to enable a sustainable future for wearable systems. I work in the intersection of human-computer interaction, systems, and machine learning, exploring how we can design wearable systems that are practical, long-lived, accurate, and helpful without sacrificing important social values.

Education

- June 2022 **Ph.D. in Computer Science, Northwestern University**
Dissertation Title: Reimagining Visual Wearable Systems
Advisor: Nabil Alshurafa
- 2016 **M.S. in Computer Science, Northwestern University**
Thesis Title: Opportunistic tangible programming by demonstration for physical components
Advisor: Micheal Horn
- 2011 **B.S. in Computer Science, Prince Sultan University**

Awards and Achievements

- 2021 **The Peter and Adrienne Barris Outstanding Teaching Award**
- 2020 **Rising Stars in EECS**
- 2019 **SIGCHI Student Travel Award**
- 2018 **UbiComp Travel Award**
- 2017 **Best Poster Award at 2017 Obesity Week (eHealth/mHealth Section)**
- 2016 **Best Paper Award at IEEE BODYNET**
- 2016 **PerCom NSF Travel Award**

Publications

— Peer-Reviewed Journals and Conference Publications

- [C05] **Heatsight: Wearable low-power omni thermal sensing**
[Rawan Alharbi](#), Chunlin Feng, Sougata Sen, Jayalakshmi Jain, Josiah Hester, Nabil Alshurafa
ACM Conference on Pervasive and Ubiquitous Computing (UbiComp/ISWC'21)
Published in ISWC

- [C04] **To mask or not to mask? Balancing privacy with visual confirmation utility in activity-oriented wearable cameras**
[Rawan Alharbi](#), Mariam Tolba, Lucia C Petito, Josiah Hester, Nabil Alshurafa
ACM Conference on Pervasive and Ubiquitous Computing (UbiComp'19)
 Published in PACM IMWUT
- [C03] **Is more always better? Discovering incentivized mHealth intervention engagement related to health behavior trends**
 Nabil Alshurafa, Jayalakshmi Jain, [Rawan Alharbi](#), Gleb Iakovlev, Bonnie Spring, Angela Pfammatter
ACM Conference on Pervasive and Ubiquitous Computing (UbiComp'19)
 Published in PACM IMWUT
- [C02] **I can't be myself: Effects of wearable cameras on the capture of authentic behavior in the wild**
[Rawan Alharbi](#), Tammy Stump, Nilofar Vafaie, Angela Pfammatter, Bonnie Spring, Nabil Alshurafa
ACM Conference on Pervasive and Ubiquitous Computing (UbiComp'18)
 Published in PACM IMWUT
- [C01] * **Food watch: Detecting and characterizing eating episodes through feeding gestures**
 Shibo Zhang, [Rawan Alharbi](#), William Stogin, Mohamad Pourhomayun, Bonnie Spring, Nabil Alshurafa
EAI International Conference on Body Area Networks (BodyNets'16)
Best Paper Award

— Publications Under Review or Preparation

- [R02] **SmokeMon: Unobtrusive Wearable for Measuring Smoking Topography**
- [R01] **ActiSight: Wearer Foreground Extraction using a Practical RGB-Thermal Wearable**

— Peer-Reviewed Workshop Papers and Extended Abstracts

- [W09] **Measuring smoking topography in natural settings using non-contact passive wearable sensors**
[Rawan Alharbi](#), Bonnie Spring, Nabil Alshurafa
Annals Of Behavioral Medicine (SBM'20)
- [W08] **"I am not an engineer": Understanding how clinicians design & alter assistive technology**
 Rahaf Alharbi, Ada Ng, [Rawan Alharbi](#), Josiah Hester
ACM CHI Conference on Human Factors in Computing Systems - Extended Abstract (EA CHI'20)
- [W07] **Detecting real time episodic overeating for just in time interventions**
 Nabil Alshurafa, [Rawan Alharbi](#), Angela F Pfammatter, Bonnie Spring
Annals Of Behavioral Medicine (SBM'18)
- [W06] **From sensing to theory: Implications of capturing naturally occurring behaviors in the wild**
 Angela F Pfammatter, [Rawan Alharbi](#), Nabil Alshurafa, Bonnie Spring
Annals Of Behavioral Medicine (SBM'18)
- [W05] **Investigating barriers and facilitators to wearable adherence in fine-grained eating detection**
[Rawan Alharbi](#), Nilofar Vafaie, Kitty Liu, Kevin Moran, Gwendolyn Ledford, Angela Pfammatter, Bonnie Spring, and Nabil Alshurafa.
IEEE Conference on Pervasive Computing and Communications - Workshop (PerCom'17 Workshop)
- [W04] **Intuito: Opportunistic tangible programming by demonstration for physical components**
[Rawan Alharbi](#), Nabil Alshurafa, Michael Horn
ACM CHI Conference on Human Factors in Computing Systems - Extended Abstract (EA CHI'17)

- [W03] **Willsense: Adherence barriers for passive sensing systems that track eating behavior**
Rawan Alharbi, Angela Pfammatter, Bonnie Spring, Nabil Alshurafa
ACM CHI Conference on Human Factors in Computing Systems - Extended Abstract (EA CHI'17)
- [W02] **From lab to field: Eating detection machine learning models, privacy, stigma and user-comfort of wearables**
Nabil Alshurafa, Rawan Alharbi
Annals Of Behavioral Medicine (SBM'17)
- [W01] **When generalized eating detection machine learning models fail in the field**
Shibo Zhang, Rawan Alharbi, Matthew Nicholson, Nabil Alshurafa
ACM Conference on Pervasive and Ubiquitous Computing - Extended Abstract (EA UbiComp'17)

Teaching Experience

— At Northwestern University

- 2022 **Computing Everywhere: Detecting Human Activities Using Wearable Sensors**
Co-Instructor and Workshop Designer
- 2021 **COMP_SCI 397/497: Wireless, and Mobile Health (mHealth)**
Instructor and Course Designer, Winter Quarter 2021
- 2020 **BDSD Workshop: Analyzing Human Behavior and Lifestyle Using Wearable Sensors Workshop**
Instructor and Workshop Designer
- 2019 **Computing Everywhere: Building Android App**
Co-Instructor and Workshop Designer

Selected Talks

— Conference Talks

- 2021 **Heatsight: Wearable low-power omni thermal sensing**
UbiComp / ISWC 2021
- 2019 **To mask or not to mask? Balancing privacy with visual confirmation utility in activity-oriented wearable cameras**
UbiComp
- 2018 **I can't be myself: Effects of wearable cameras on the capture of authentic behavior in the wild**
UbiComp
- 2017 * **Will Participants Wear Passive Sensing Devices Long Enough to Study Eating Behavior?**
Obesity week - eHealth/mHealth Section
Best Poster Award

Services

— Organizing

- 2020 **NSF-funded workshop on Technology for Automated Capture of Diet**
Student Volunteer
- 2019– **Northwestern Graduate Women in Computing (GWiC)**
2020 *Co-Director*
- 2018 **UbiComp Conference**
Student Volunteer

— Reviewing

- 2019 – **ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)**
✱ *2-3 reviews per year*
 2 x Special Recognitions for Outstanding Reviews
- 2019– **ACM Conference on Human Factors in Computing Systems (CHI)**
 1-2 reviews per year
- 2019 **IEEE EMBS International Conference on Biomedical & Health Informatics (BHI)**

References

Available upon request