# Yasaman S. Sefidgar

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I am a Human-Computer Interaction researcher working on improving systems that help people collect and use data. I am especially interested in personal data tools for health. I build systems, design interaction techniques, and develop computational algorithms that allow individuals to control data and AI systems and align these systems to their evolving needs.

## Education

**2020–2025**   **University of Washington, Seattle, WA, USA**
**Ph.D.** in Computer Science and Engineering
*Thesis: Goal-Centered Personal Informatics Tools*
Committee: James Fogarty, Sean Munson, Jina Suh, Jeff Heer, Andrea Hartzler

**2017–2019**   **University of Washington, Seattle, WA, USA**
**M.Sc.** in Computer Science and Engineering
*Area: End-User Programming of Robots & Ubiquitous Computing for Diversity*
Advisors: Maya Cakmak, Jen Mankoff

**2013–2014**   **Simon Fraser University, Burnaby, BC, Canada**
**M.Sc.** in Computer Science
*Area: Computer Vision & Machine Learning*
Advisor: Greg Mori

**2010–2012**   **University of British Columbia, Vancouver, BC, Canada**
**M.Sc.** in Computer Science
*Area: Human-Computer Interaction & Haptics*
Advisor: Karon MacLean

**2005–2009**   **Sharif University of Technology, Tehran, Iran**
**B.Sc.** in Computer Engineering
*Area: Computer Hardware Engineering*

## Awards & Honors

**2024**   **Schmidt Science Fellowship Nominee** (University of Washington; advanced to global competitions)
**Best Paper Award of CHI 2024 for P17** (ACM CHI, top 1%)
**Dissertation Fellowship Finalist** (American Association for University Women, $25,000)
**2023**   **Distinguished Paper Award of IMWUT 2023 for P15** (ACM UbiComp, top 1%)
**2021-2023**   **Meta PhD Fellowship** (Meta, $42,000 annually)
**2019**   **IBM Fellowship Nominee** (Allen School)
**2017**   **Honorable Mention Award of HRI 2017 for P3** (ACM HRI, top 5%)
**2015**   **Health Systems Management Award** (Ontario Health, CAD $1,000)
**2012**   **Haptics Symposium Best Demo Honorable Mention** (IEEE HS)
**2009**   **Merit Scholarship** (University of British Columbia, top 8% of Computer Science)
**2008**   **Exceptional Talent Award** (Sharif University of Technology, top 5% of Computer Engineering)
**2005**   **Top 0.01% of Math and Engineering Undergraduate Students Nation-wide** (Iran)

# Publications

## Refereed Journal and Conference Papers

**2024** P19 **GLOBEM: Cross-Dataset Generalization of Longitudinal Human Behavior Modeling**
Xu X., Liu X., Zhang H., Wang W., Nepal S., ***Sefidgar, Y.S.***, Seo W., Kuehn K.S., Huckins J.F., Morris M.E., Nurius P.S., Riskin E., Patel S., Althoff T., Campbell A.T., Dey A.K., Mankoff J.
*GetMobile: Mobile Computation and Communication* [DOI]

P18 **College Students' Daily Mind Wandering Is Related to Lower Social Well-Being**
Beloborodova P., Dutcher J.M., Villalba D.K., Tumminia M.J., Doryab A., Creswell K., Cohen S., ***Sefidgar Y.S.***, Seo W., Mankoff J., Dey A.K., Creswell D., Brown K.W.
*Journal of American College Health* [DOI]

P17 🏆 **MigraineTracker: Examining Patient Experiences with Goal-Directed Self-Tracking for a Chronic Health Condition**
***Sefidgar Y.S.***, Castillo C.L., Chopra S., Jiang L., Jones T., Mittal A., Ryu H., Schroeder J., Cole A., Marinova N., Munson S., Fogarty J.
*CHI'24 Conference on Human Factors in Computing Systems* [DOI]
Best Paper Award

P16 **Improving Work-Nonwork Balance with Data-Driven Implementation Intention with Mental Contrasting**
***Sefidgar Y.S.***, Jörke M., Suh J., Saha K., Iqbal S., Ramos G., Czervinski M.
*CSCW'24 ACM Conference on Computer-Supported Cooperative Work* [DOI]

**2023** P15 🏆 **GLOBEM: Cross-Dataset Generalization of Longitudinal Human Behavior Modeling**
Xu X., Liu X., Zhang H., Wang W., Nepal S., ***Sefidgar Y.S.***, Seo W., Kuehn K.S., Huckins J.F., Morris M.E., Nurius P.S., Riskin E., Patel S., Althoff T., Campbell A.T., Dey A.K., Mankoff J.
*IMWUT'23 ACM Interactive, Mobile, Wearable & Ubiquitous Technologies Proceedings* [DOI]
Distinguished Paper Award

P14 **Pearl: A Technology Probe for Machine-Assisted Reflection on Personal Data**
Jörke M., ***Sefidgar Y.S.***, Massachi T., Suh J., Ramos G.
*IUI'23 Conference on Intelligence User Interfaces* [DOI]

P13 **Nightly Sleep Duration Predicts Grade Point Average in the First Year of College**
Creswell D., Tumminia M.J., Price S., ***Sefidgar Y.S.***, Cohen S., Ren Y., Brown J., Dey A.K., Dutcher J.M., Villalba D., Mankoff J., Xu X., Creswell K., Doryab A., Mattingly S., Striegel A., Hachen D., Martinez G., Lovett M.C.
*PNAS'23 Proceedings of the National Academy of Sciences of the USA* [DOI]

**2022** P12 **GLOBEM Dataset: Multi-Year Datasets for Longitudinal Human Behavior Modeling Generalization**
Xu X., Zhang H., ***Sefidgar Y.S.***, Ren Y., Liu X., Seo W., Brown J., Kuehn K.S., Merrill M., Nurius P.S., Patel S., Althoff T., Morris M.E., Riskin E., Mankoff J., Dey A.K.
*NeurIPS'23 Advances in Neural Information Processing Systems* [Link]

P11 **Lack of Belonging Predicts Depressive Symptomatology in College Students**
Dutcher J.M., Lederman J., Jain M., Price S., Kumar A., Villalba D.K., Tumminia M.J., Doryab A., Creswell K., Riskin E., ***Sefidgar Y.S.***, Seo W., Mankoff J., Cohen S., Dey A.K., Creswell D.
*Psychological Science* [DOI]

P10 **Impact of Online Learning in the Context of COVID-19 on Undergraduates with Disabilities and Mental Health Concerns**
Zhang H., Morris, M.E., Nurius P.S., Mack K., Brown J., Kuehn K.S., ***Sefidgar Y.S.***, Xu X.,

Riskin E., Dey A.K., Mankoff J.
*ACM Transactions on Accessible Computing* [DOI]

2021  P9  **College from Home during COVID-19: a Mixed-methods Study of Heterogeneous Experiences**
Morris M.E., Kuehn K.S., Brown J., Nurius P.S., *Sefidgar Y.S.*, Riskin E., Dey A.K., Xu X.,
Consolvo S., Mankoff J.
*PloS one* [DOI]

P8  **Distress Among Undergraduates: Marginality, Stressors and Resilience Resources**
Nurius P., *Sefidgar Y.S.*, Kuehn K.S., Jung J., Zhang H., Figueira O., Dey A.K., Riskin E.,
Mankoff J.
*Journal of American College Health* [DOI]

P7  **Leveraging Collaborative-Filtering for Personalized Behavior Modeling: a Case Study of
Depression Detection among College Students**
Xu X., Chikersal P., Dutcher J.M., Sefidgar Y.S., Seo W., Tumminia M.J., Villalba D.K., Cohen
S., Creswell K., Creswell D., Doryab A., Nurius P.S., Riskin E., Dey A.K., Mankoff J.
*IMWUT'21 ACM Interactive, Mobile, Wearable & Ubiquitous Technologies Proceedings* [DOI]

2019  P6  **Passively Sensed Behavioral Correlates of Discrimination Events in College Students**
*Sefidgar Y.S.*, Seo W., Kuehn K.S., Althoff T., Browning A., Riskin E., Nurius P., Dey A.K.,
Mankoff J.
*CSCW'19 ACM Conference on Computer-Supported Cooperative Work* [DOI] [Press]

P5  **Using Passive Data Monitoring and Machine Learning Algorithms to Examine Negative
Affect and Coping Behaviors Among College Students Experiencing Suicidal Ideation**
Kuehn K.S., *Sefidgar Y.S.*, Nurius P., Browning A., Riskin E., Dey A.K., Mankoff J.
*IASR/AFSP International Summit on Suicide Research* Link

2018  P4  **RobotIST: Interactive Situated Tangible Robot Programming**
*Sefidgar Y.S.*, Weng T., Harvey H., Elliott S., Cakmak M.
*SUI'18 ACM Symposium on Spatial User Interaction* [DOI]

2017  P3  **Situated Tangible Robot Programming**
🏅  *Sefidgar Y.S.*, Agarwal P., Cakmak M.
*HRI'17 International Conference on Human-Robot Interaction* [DOI]
Best Paper Honorable Mention

2016  P2  **Design and Evaluation of a Touch-Centered Calming Interaction with a Social Robot**
*Sefidgar Y.S.*, MacLean K.E., Yohanan S., Van der Loos M., Croft E.A., Garland E.J.
*IEEE Transactions on Affective Computing* [DOI]

2015  P1  **Discriminative Key-Component Models for Interaction Detection and Recognition**
*Sefidgar Y.S.*, Vahdat A., Se S., Mori G.
*Computer Vision and Image Understanding* [DOI]


## Upcoming Manuscripts In Preparation or Submission

U4  **Analyticons: an Architecture for End-user Interactive Analysis of Personal Data**
*Sefidgar Y.S.*, Suh J., Munson S., Heer J., Fogarty J.

U3  **Submodular Behavior Summarization**
*Sefidgar Y.S.*, Sharma A., Riskin E., Nurius P.S., Dey A.K., Mankoff J., Fogarty J., Althoff T.

U2  **Examining Needs and Opportunities for Supporting Students Who Experience Discrimination**
*Sefidgar Y.S.*, Nurius P.S., Baughan A., Elkin L., Dey A.K., Riskin E., Mankoff J., Morris M.

U1    **Examining Information Goals in Self-Tracking for Chronic Condition Management: Case Study of Migraine**
*Sefidgar Y.S.*, Castillo C.L., Chopra S., Ryu H., Munson S., Fogarty J.
*CHI'25 Conference on Human Factors in Computing Systems Case Studies*

## Doctoral Symposiums

2024  DS3  **Supporting Control and Alignment in Personal Informatics Tools**
*Sefidgar Y.S.*
*UIST'24 Adjunct ACM Symposium on User Interface Software and Technology* [DOI]

2023  DS2  **Tools to Support Health and Well-being with Personal Data**
*Sefidgar Y.S.*
*CSCW'23 Companion Publication of ACM Conference on Computer Supported Cooperative Work and Social Computing* [DOI]

2018  DS1  **End-User Programming of Manipulator Robots in Situated Tangible Programming Paradigm**
*Sefidgar Y.S.*, Cakmak M.
*HRI-Pioneers'18 Human-Robot Interaction Pioneers Workshop* [DOI]

## Case Studies, Workshops, Posters, and Works-in-Progress

2023  CS1  **Lessons Learned for Data-Driven Implementation Intentions with Mental Contrasting**
*Sefidgar Y.S.*, Jörke M., Suh J., Saha K., Iqbal S., Ramos G., Czervinski M.
*CHI'23 Conference on Human Factors in Computing Systems Case Studies* [DOI]

2017  W2  **Programming Robot Manipulators with Tangible Blocks**
*Sefidgar Y.S.*, Cakmak M.
*Workshop on Evaluation and Usability of Programming Languages and Tools* [Link]

      W1  **A System for Situated Tangible Programming of Robot Skills**
*Sefidgar Y.S.*, Elliott S., Cakmak M.
*Workshop on Learning for Collaborative Robotics: Enabling Flexible, Redeployable and Agile Industrial Applications* [Link]

2012  PS1  **Emotional Communication and Implicit Communication through Touch**
MacLean K.E., Yohanan S., *Sefidgar Y.S.*, Pan M.K.X.J., Croft E.A., McGrenere J.
*Affective Haptics Workshop – Haptics Symposium* [Link]

2011  WP1  **TAMER: Touch-guided Anxiety Management via Engagement with a Robotic pet**
*Sefidgar Y.S.*, MacLean K.E., Croft E.A., Van der Loos M., Garland E.J., Yohanan S.
*Work In Progress - Graphics, Animation, and New Media*

# Professional Appointments

2020–2025  **University of Washington, Seattle, WA, USA**
*Student Researcher in Desgin, Use, & Build Group*
Mentors: James Fogarty, Sean Munson, Jeff Heer
Examining frameworks, interaction techniques, and architectures for personal data tools
[P17, U20, U23]

| 2022 | **Microsoft Research, Redmond, WA, USA** |
|---|---|
| | *Research Intern in Human Empathy & Understanding Group* |
| | Mentors: Jina Suh, Mary Czervinski |
| | Designing and evaluating scaffolding techniques for behavior change |
| | [CS1, P14, P16] |

| 2018–2020 | **University of Washington, Seattle, WA, USA** |
|---|---|
| | *Student Researcher in Make4All Lab* |
| | Mentors: Paula Nurius, Jen Mankoff |
| | Developing computational infrastructure and algorithms to quantify social adversities |
| | [P5, P6, P7, P8, P9, P10, P11, P12, P13, P15, P18, P19, U21, U22] |

| 2016–2018 | **University of Washington, Seattle, WA, USA** |
|---|---|
| | *Research Associate in Human-Centered Robotics Lab* |
| | Mentor: Maya Cakmak |
| | Designing and evaluating end-user robot programming tools |
| | [W1, W2, P3, P4] |

| 2014–2015 | **Jonah Consulting Inc, Toronto, ON, Canada** |
|---|---|
| | *Technical Developer* |
| | Mentor: Mathew Solo |
| | Developing solutions for healthcare and financial clients |

| 2012–2014 | **Simon Fraser University, Burnaby, BC, Canada** |
|---|---|
| | *Student Researcher in Vision & Media Lab* |
| | Mentors: Greg Mori |
| | Developing human-object interaction models |
| | [P1] |

| 2010–2012 | **University of British Columbia, Vancouver, BC, Canada** |
|---|---|
| | *Student Researcher in Sensory Perception & Interaction Lab* |
| | Mentors: Karon MacLean |
| | Designing affective haptic robot behaviors |
| | [WP1, PS1, P2] |

# Talks

| 2024 | **UIST'24 Doctoral Symposium** |
|---|---|
| | Supporting Control and Alignment in Personal Informatics Tools |
| | |
| | **CHI'24 Chronic Conditions A** |
| | MigraineTracker: Examining Patient Experiences with Goal-Directed Self-Tracking for a Chronic Health Condition |

| 2023 | **CSCW'23 Doctoral Consortium** |
|---|---|
| | Tools to Support Health and Well-being with Personal Data |
| | |
| | **DUB'23 Doctoral Consortium** |
| | Tools to Support Health and Well-being with Personal Data |
| | |
| | **CHI'23 Case Studies** |
| | Lessons Learned for Data-Driven Implementation Intentions with Mental Contrasting |

| 2022 | **Microsoft Research, Applied Research Invited Talk Series** |
|---|---|
| | WoNoB: Improving Work-Nonwork Balance with Personal Data |

**Microsoft Research, HCI Seminar**
WoNoB: Improving Work-Nonwork Balance with Personal Data

2019 **CSCW'19 Language & Expressivity II**
Passively Sensed Behavioral Correlates of Discrimination Events in College Students

2018 **SUI'18 Robotics & Wearables**
RobotIST: Interactive Situated Tangible Robot Programming

2017 **PLETEAU'17 Language, DSL, & Feature Design**
Programming Robot Manipulators with Tangible Blocks

**HRI'17 Teaching Robots**
Situated Tangible Robot Programming

# Research Mentoring Experience

## Project-Focused Graduate Peer Mentoring

2020-2023 Carla Castillo, Human-Centered Design & Engineering, University of Washington
2019-2020 Han Zhang, Computer Science & Engineering, University of Washington

## Undergraduate Mentoring

2018-2020 Bowen Xu, Computer Science & Engineering, University of Washington
2019-2020 Jake Jung, Computer Science & Engineering, University of Washington
2018-2019 Ying Wang, Computer Science & Engineering, University of Washington
2018-2019 Estelle Jiang, Computer Science & Engineering, University of Washington
2020 Jyoti Lama, Computer Science & Engineering, University of Washington
Jonathan Zhao, Computer Science & Engineering, University of Washington
2019 Sean Keever, Computer Science & Engineering, University of Washington
Zongyuan Checn, Computer Science & Engineering, University of Washington
Olivia Figueira, Computer Science & Engineering, Santa Clara University (DREU internship)
2018 Geovani Castro, Computer Science & Engineering, University of Washington
Mayki Hu, Computer Science & Engineering, University of Washington
Nicole Riley, Computer Science & Engineering, University of Washington
Shohbit Jain, Computer Science & Engineering, University of Washington

# Teaching Experience

2024'Winter **Human-Computer Interaction**, Computer Science & Engineering, University of Washington
Graduate teaching assistant; duties: lab sections and grading (64 undergraduates)

2017'Spring **Human-Computer Interaction**, Computer Science & Engineering, University of Washington
Lead graduate teaching assistant; duties: lab sections and grading (29 professionals)

2013'Spring **Data Structures and Algorithms**, Computer Science, Simon Fraser University
Teaching assistant; duties: lab sections and grading (100 undergraduates)

2013'Spring **Scientific Computer Programming**, Computer Science, Simon Fraser University
Graduate teaching assistant; duties: lab sections and grading (40 non-majors)

2010'Spring **Introduction to Computing in Engineering**, Computer Science, University of British Columbia
Graduate teaching assistant; duties: lab sections and grading (250+ undergraduates)

| 2009'Fall | **Introduction to Computing in Engineering**, Computer Science, University of British Columbia |

2009'Fall | **Introduction to Computing in Engineering**, Computer Science, University of British Columbia
Graduate teaching assistant; duties: lab sections and grading (250+ undergraduates)

2009'Spring | **Signals & Systems**, Computer Engineering, Sharif University of Technology
Undergraduate teaching assistant; duties tutorials (80+ undergraduates)

2008'Fall | **Signals & Systems**, Computer Engineering, Sharif University of Technology
Undergraduate teaching assistant; tutorials (80+ undergraduates)

2008'Fall | **Linear Control Systems**, Computer Engineering, Sharif University of Technology
Undergraduate teaching assistant; held tutorials (20 undergraduates)

# SERVICE

## STUDENT EMPOWERMENT

2020-2022 | Computer Science & Engineering, University of Washington
Member of Graduate Student Council

2020-2022 | Computer Science & Engineering, University of Washington
Member of Diversity, Equity and Inclusion Committee

2012-2013 | Computer Science, Simon Fraser University
Member of Women in Computing

2011 | Computer Science, University of British Columbia
Peer mentor in Tri-Mentoring Program

## ORGANIZER

2014 | Pacific North West Celebration of Women in Computing Conference
Poster Competition

2011 | Computer Science, University of British Columbia
HCI Grad Research Forum

## REVIEWER

2024 | ACM CHI
ACM CSCW
ACM IMWUT (Interactive, Mobile, Wearable & Ubiquitous Technologies)

2023 | ACM CHI
ACM ToCHI (Transactions on Computer-Human Interaction)

2022 | ACM CHI

2021 | ACM CSCW
ACM CHI

2020 | ACM CSCW (Conference on Computer-Supported Cooperative Work)
ACM CHI

2017 | Robotics and Computer Integrated Manufacturing
ACM CHI (Conference on Human Factors in Computing Systems)

2016 | IEEE RO-MAN (International Symposium on Robot and Human Interactive Communications)
ACM HRI (International Conference on Human-Robot Interaction

2015 | International Journal of Human-Computer Studies

# Selected Media Coverage

2019      Discrimination Influences Student Activity and Mood
              Inside Higher Ed, Nov 06, 2019

# Extracurricular

## Athletic Awards

2007      Badminton Competitions, Sharif University of Technology
              Champion

2006      Badminton Competitions, Sharif University of Technology
              Champion

# References

**James Fogarty**
Professor, Computer Science & Engineering, Unveristy of Washington
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**Sean Munson**
Professor, Human Centered Design & Engineering, Unveristy of Washington
smunson@uw.edu

**Tim Althoff**
Associate Professor, Computer Science & Engineering, Unveristy of Washington
althoff@cs.washington.edu

**Jina Suh**
Principal Researcher, Microsoft Research
jinsuh@microsoft.com

**Paula S. Nurius**
Professor, School of Social Work
nurius@uw.edu