



Fairware'22

The International Workshop on Equitable Data & Technology brings together academic researchers, industry researchers, and practitioners interested in exploring ways to build **fairer, more equitable**, data-driven software.

Co-located with ICSE'22, the FairWare'22 meeting will include keynotes on software fairness from different perspectives. FairWare'22 will also host panel sessions to invite researchers and the audience to engage in discussion.

Since many issues associated with fairness are often sociological in nature, we welcome **commentaries from outside of computer science** that can shed light on the complex issue of fairness.

CFP in PDF

May 2022

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About FairWare

There are too many recent examples where software has been implicated in the perpetuation of social injustice. For example, facial recognition software used by police historically, still today, mimic the inequities in the criminal justice system. Healthcare software contributes to disparities in access and treatment. Online search engines perpetuate societal stereotypes. E-commerce uses (and contributes to) differences in treatment and expectations of economic classes.

Why is this important?

Society now demands that its software be fairer and more equitable. Governments, companies and professional societies such as the European Union, Microsoft, and the IEEE have white papers discussing requirements for fair and ethical software. While these documents differ in the details, they all agree that ethical software should must be "FAT"; i.e. fair, accountable and transparent and include:

- Integration with **human agency**
- **Accountability** where conclusions are challenged
- **Transparency** of how conclusions are made
- Oversight on what must change to **fix bad conclusions**
- **Inclusiveness** such that no specific segment of society is especially and unnecessarily privileged or discriminated

Special Issue CFP

Following up from our conference, all authors are welcomed to submit extended versions of their submitted papers to the special issue on the [EMSE](#) journal. Click the button below to access the call for papers.

Special Issue CFP

FairWare Resources

The FairWare conference is over, and what an experience it was! We gathered many resources, open questions and ideas for future FairWare editions from our great discussions. These are available in the link below. You are welcome to leave new ideas or resources as well!

Keynote: Centering the Margins: An inquiry into equity, justice, & society

Participatory design (PD) is idealized as a democratic approach to creativity and design thinking, yet in many instances, this method translates to a privileged activity. Although this method has become what feels like an ethical answer to individuals at the margins, the sheer use of PD inherently creates an imbalance in power and equality between trained designer/academic researcher and those at the focus of the design. As many marginalized communities have historically been exploited by research in the ivory tower, PD engagements can be greatly steeped in these power dynamics and any cultural differences between researcher and community/individual, despite careful attention and focus that might be placed on making PD inclusive. In this talk, I focus the attention of the HCI and design community on more equitable and ethical PD engagements examining how we conduct design research with certain communities and how deficit approaches are embedded in our research practices, such as houseless emerging adults attempting to break the cycle of poverty. By reflecting on these tensions as a call to action, I hope to deconstruct the privileges of our actions and re-center the focus of design on individuals who are historically underserved.



Speaker: **Dr. Angela D.R. Smith** <https://angeladrsmith.com/>

Dr. Angela D.R. Smith is an Assistant Professor at the School of Information, University of Texas at Austin. She received her doctoral degree from Northwestern University in Technology & Social Behavior, a joint degree in Communications and Computer Science. Her research is in the field of Human-Computer Interaction, Computer-Supported Cooperative Work, and Information Sciences. Her current research explores how critical and intersectional theoretical lenses can inform an assets-based participatory design of technologies to support historically marginalized groups, such as individuals of color and individuals experiencing homelessness, in pursuing sustainable, emancipatory transformations and socially responsible technology experiences. Through qualitative, participatory design methods, she seeks to co-construct knowledge, conscientization, and design interventions with these populations.

Schedule

Note: All times are in UTC-5 timezone.

8:45 **Welcome from the organizers**

9:00-10:00 **Panel:**

- *The Role of Software Engineering Foundations in Critical Automated Decision-Making Systems*
Marc Canellas, Bruce Hedin, Nathan Adams, Jeanna Matthews (moderator)

10:00-10:15 **Coffee Break**

10:15-11:00 **Session 1: Algorithmic Fairness**

- *Fair-SSL: Building fair ML Software with less data*
Joymallya Chakraborty, Suvodep Majumder, and Huy Tu
- *Fair Decision Making via Automated Repair of Decision Trees*
Zhang Jiang, Ivan Beschastnikh, Sergey Mechtaev, and Abhik Roychoudhury
- *Privileged and Unprivileged Groups: An Empirical Study on the Impact of the Age Attribute on Fairness*
Max Hort and Federica Sarro

11:00-11:45 **Discussion (Breakout Groups)**

11:45-12:15 **Break**

- Grab lunch and get ready for the Lunch and Learn keynote.

12:15-13:15 **Lunch and Learn keynote**

- **Keynote speaker:** Dr. Angela D.R. Smith
Centering the Margins: An inquiry into equity, justice, and society

13:15-13:30 **Coffee Break**

13:30-14:00 **Session 2: Towards Sociotechnical Equity**

- *Detecting Obstacles to Collaboration in an Online Participatory Democracy Platform: A Use-case Driven Analysis*
William Aboucava, Rafael Angarita, and Valérie Issamy
- *Making Recruitment More Inclusive: Unfairness monitoring for a job matching machine learning algorithm*
Sebastien Delecraz, Loukman Eltarr, Martin Becuwe, Henri Bouxin, Nicolas Boutin, and Olivier Oullier

15:00-16:00 **Panel:**

- *Beyond Algorithmic Fairness: Open Issues in Fair and Equitable Data and Technology*
Geraldine Fitzpatrick, Jaye Nias, Andrew Begel, Jie Zhang, Brittany Johnson (moderator)

16:00-16:30 **Workshop Closing + Plans for ICSE**

Topics of Interest

- **Socio-technical challenges**
 - How to determine the **trade-off** between making fair(er) systems and other objectives of a system?
 - How do we build equitable software given the inherently unfair social pressures behind it?
- **Algorithmic challenges**
 - How to **identify bias** in AI models?
 - How to **explain** the source or reason for this bias?
 - How to **measure** the level of bias in systems?
 - How to **mitigate** the effect of this bias by changing how models are trained?
 - How to **provide** support for explanation of automated decisions and redress for stakeholders and other mechanisms for accountability and transparency of deployed systems?

Fairware'22 welcomes papers that:

- Explore problems of equity in data-driven software
- Propose and critique ways to improve inclusiveness
- Define tools and techniques for supporting the development of data-driven solutions
- Enumerate challenges that need to be addressed to improve data-driven software development

Paper Submission

Papers will be submitted through [HotCRP](#), and will be subjected to **double-blind** reviews. Submissions must use the official “ACM Primary Article Template” from the [ACM proceedings template](#). LaTeX users should use the sigconf option, as well as the review (to produce line numbers for easy reference by the reviewers) and anonymous (omitting author names) options. In addition, submitted papers must not exceed the 7-page limit, be written in English, must present an original contribution, and must not be published or under review elsewhere.

Two members of the program committee will review each paper and the committee will select the papers for presentation at workshop based on quality, relevance, and the potential for starting meaningful and productive conversations.

Workshop Participation

At least one author of each accepted paper must register for the workshop. Each paper will be presented in a 15-20 minute presentation with follow-up questions and discussion.

Special Issue

Following on from the workshop, there will be an open call for a special journal issue on fair and equitable data and technology. In that special issue, reviewers from this workshop will review extended versions of the FairWare'22 papers. For more details see our [journal special issue call for papers](#).

Important Dates

- Submission: **21 Jan**
- Notification of acceptance: **25 Feb**
- Camera-ready submission: **18 Mar**
- Workshop date: **9 May**
- Submission for follow-up journal special issue: **Sept 15, 2022** [\[details\]](#)

Programme Committee

- Saba Alimadadi, Simon Fraser University
- Christian Bird, Microsoft Research
- Alicia Boyd, DePaul University, USA
- Marc Canellas, Office of the Public Defender for Arlington County and Falls Church
- Joymallya Chakraborty, NC State University
- Denae Ford, Microsoft Research
- Lelia Hampton, MIT

Organizing Committee

- Brittany Johnson, George Mason University, USA
- Alicia Boyd, DePaul University, USA
- Justin Smith, Lafayette College, USA
- Leonardo Villalobos-Arias, NC State University, USA
- Tim Menzies, NC State University, USA
- Jeanna Matthews, Clarkson University, USA

- Austin Henley, University of Tennessee Knoxville
- Brittany Johnson, George Mason University, USA
- Jeanna Matthews, Clarkson University, USA
- Tim Menzies, NC State University, USA
- Kevin Moran, George Mason University
- Mei Nagappan, University of Waterloo
- Rahul Pandita, GitHub
- Liliana Pasquale, University College Dublin
- Gema Rodriguez-Perez, University of British Columbia
- Joanna C. S. Santos, University of Notre Dame
- Justin Smith, Lafayette College, USA
- Leonardo Villalobos-Arias, NC State University, USA

Previous editions

- 2018 - <https://fairware.cs.umass.edu/> - ACM DL