

Women in Compilers & Tools Meetup Series

A Case Study on Cultivating A Community

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Introduction

What is the WiCT Meetup Series?

- A free ~~virtual~~ now hybrid! event series
- Launched in April 2021
- A platform where all trans, non-binary, and cis women in various stages in their career present their work, speak openly, discuss, and network with others
- Features Talks, Fireside Chats, Trivia Nights, In Person meets & more
- Organized by Volunteers

Origins

Create a Dedicated Space

- Encourage women at all levels to learn about what others are doing and can participate
- Surface role models for newcomers and enthusiasts
- Offer opportunities to build relationships and network with others during the pandemic and beyond
- Discuss and overcome difficult but common adversities

Our collective experience that seeing more women in the field, thriving in the field and playing important roles in how it develops is a crucial factor in relating to the field and closing the gender gap.

Origins

Address the Elephant in Room

Why do we need a special group for women in compilers and related fields?

- We recognize when we see conference attendance, code contributions, research submissions etc, that the proportion of women in these isn't representative of the general population. We want to change that.

Can men attend these meetups?

- Yes, the meetup is open to everyone. As one of our long time supporters of this group, **David Blaikie** said, quoting him, this group is for all those who understand why such a group needs to exist.

The Meetups

Our Speakers

Past Meetups



Jessica Paquette

Bringing up GlobalSel for AArch64



Angélica Moreira

Static Profiling: Why Should You Try It?



Michelle Strout

Compilers Education and More with Michelle



Uma Srinivasan

From Packing Decimals With Cobol to Optimizing Tweets With Scala: A Journey Through Space, Time, & Culture with Compilers



Theresa Foley

Taking the Slang Shading Language From Research to Production



Anna Ossowski

Python in Open Source and More with Anna



Cristina Cifuentes

From Student of Compilation to Mother of Decompilation



Sangeeta Chowdhary

Fast and Precise Approaches to Detect, Debug, and Repair Numerical Errors



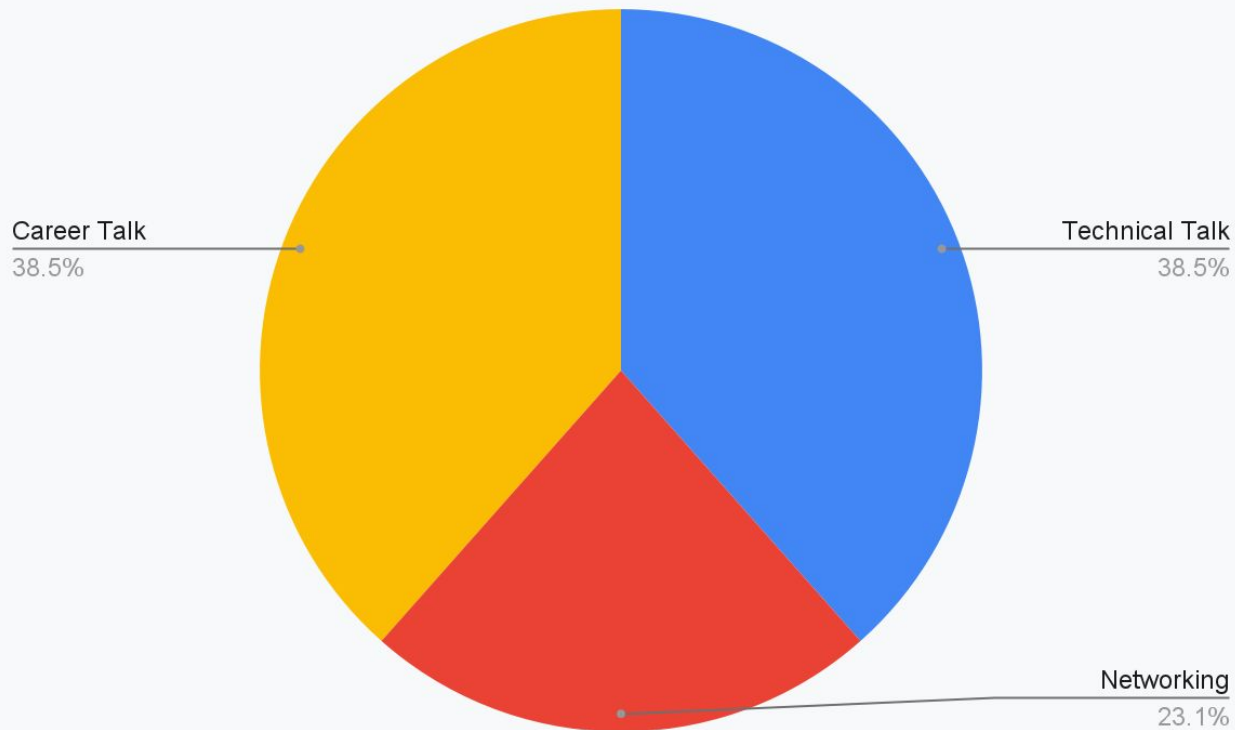
Teresa Johnson

ThinLTO and More with Teresa

Topics Explored

- **Core LLVM**
 - GlobalISel for AArch64
 - ThinLTO
- **Research Fields**
 - Robust Instrumentation for Floating Point Computation Errors
 - Static Profiling with the VESPA Project
 - Symbolic Logic Solving with Z3
- **Production Level Programming Languages**
 - Chapel @ Hewlett Packard Enterprise
 - Slang Shading @ NVIDIA
- **Career Growth**
 - Pioneering the field of Decompilation
 - Long lasting effect of the Itanium Project @ HP
 - From Industry to Academia and Around Again
- **Community Focuses**
 - Mental Health
 - Mentorship
 - Balancing work with family responsibilities
 - Hidden labor and promoting diversity at workplace

Topics Explored



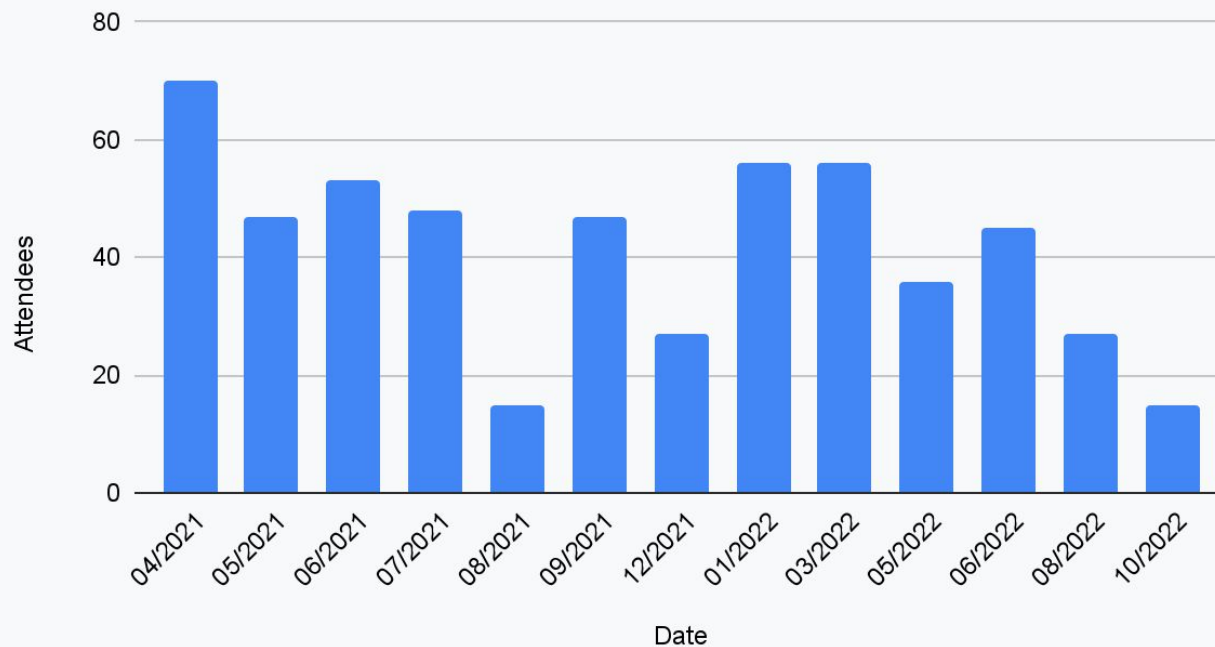
The Community

Our Audience

- Students, Professors, Industry researchers, Developers, and Compiler Enthusiasts
- New Grad Individual Contributors to Directors with 20+ years experience
- Not exclusively women

The Community

Engagement Over the Series



Reflections

Discuss at your table

Do you find it harder to ask questions on open-source projects or discussion forums?

Do you overthink about being judged on the basis of your code?

How many times do you re-read an email before sending it?

Do you seek opportunities to be highlighted and yet don't know where to start?

Do you seek a community or a support system to discuss work life balance problems, career growth options, salary compensation, etc.?

Reflection

Common Themes

- Mentorship is valuable
- There is a cost to hidden labor
 - Especially “non-engineering” labor
 - How can we change this?
- Imposter Syndrome still exists
- Work-Life Balance can be hard
 - It can be different for everyone
- Salary Compensation

Reflection

Lessons Learned

- Technical Lessons
 - Overall compiler construction
 - Writing global instruction selection, link time optimizations in LLVM
 - Static profiling in compilers to find performance gaps
 - Decompiling (reverse engineer from assembly) to determine vulnerability issues
 - Finding floating point precision issues in compilers
 - Using human computer interaction techniques to improve learning of compilers
- Non-Technical Lessons
 - Learning groups/collaborations are important to learn new ideas, concepts, techniques
 - Past collaborations become your support system as the years pass by
 - Students are so keen to enter into grad school programs but they seek better mentors
 - Rejections are real and so common
 - Repeated attendees at the meetup series add value to the discussions and learnings

Reflection

Challenges

- Outreach can be hard
 - Where are people getting their information?
 - Twitter, LLVM Discourse, LLVM Weekly, Word of Mouth
 - What other mediums work well?
 - How to reach audiences outside personal networks?
 - Academic Outreach
- RSVP numbers are not useful
 - Plans change, especially when an event is virtual

Reactions

Reactions

Perception of the Series

- Lots of positive comments

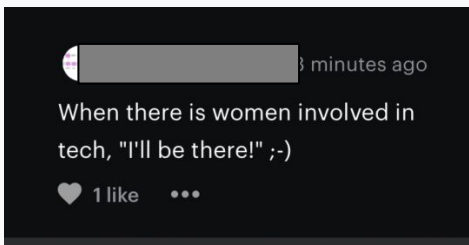
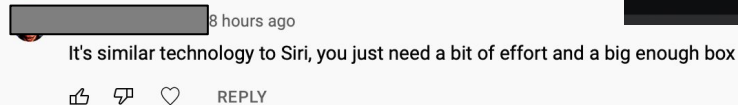
“I'm glad to find this group that is friendly to trans woman. <redacted> I'm getting stronger and stronger willing to come out as transgender to my collages and community. I'd like to seek advices and suggestions from you. Thanks.”

“I enjoy your events, and I really appreciate the time and effort you all are putting into building a community. I think you and the group are playing an important role in the broader computing community. “

Reactions

Perception of the Series

However, some very negative comments or rude jokes



Our Goals & Measuring Success

- Help create new relationships between women of the compiler & tools community
- Highlighting the work women are doing in this domain
 - Technical Work
 - And common challenges women are facing
- Continuing to grow the community
 - Representation at compiler related events and conferences
 - Leadership
 - Contributors to open source & LLVM

Successful Takeaways

- We may be underrepresented but our presence can be felt and now seen!
- Negative comments are unfortunate, but we are not deterred
- Community Spaces are a wonderful way to feel supported in your career goals



Women in Compilers and Tools

This community group is to connect women in the field of compilers and tools. This group provides the ability to discuss with other women regarding topics that span across the field of compilers and tools, which includes supporting inclusivity in the community.

Upcoming Events

[Women in Compilers and Tools Meetup Series](#)

Chat with us

Discord: [#women](#)

The Future

How To: Community Groups

Connect with Others From Similar Backgrounds & Experiences

- LLVM Foundation provides resources for
 - Meetup.com group scheduling
 - Recurring Zoom meetups
 - Create Discord Channel and Discourse tag
- Promote your group through
 - LLVM Blogs
 - LLVM Weekly
 - [Community-dot-o.llvm.org](https://community-dot-o.llvm.org)

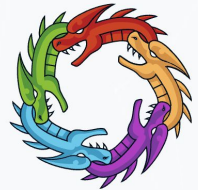
The Future for WiCT Meetups

- Quarterly In Person Meetups
- Highlight open job opportunities
- Tutorial sessions
 - Public Speaking
 - Debugging through large codebases
 - Traversing ASTs
- Focused Panels
 - What Hiring Managers want to see in Candidates
- Joint Organization Meetups

Get Involved with WiCT!

Successful open source projects are those where the users are also the developers, and similarly the success of this group depends on volunteers from the community we are building

- Share your learnings, interests, and work with others
- Tell us what you find engaging
- Nominate speakers
- Provide Mentorship
- Get feedback on ongoing projects
- Invite colleagues



COMMUNITY.O

Linking Together All Communities

Get Involved with WiCT!

<https://community-dot-o.llvm.org>

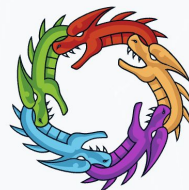
Attend our meetups: <https://www.meetup.com/meetup-group-ifwtlvwd/>

Watch the past meetups:

https://www.youtube.com/watch?v=K558YT30AKE&list=PL_R5A0lGi1AAVLVOTNHMeHbC4m1J1QFLZ

Chat with us: <https://discord.gg/bmPypB883n>

Reach out to us about volunteering: wict-wg@llvm.org



COMMUNITY.O

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