

# Mel Chua: Hacker. Writer. Researcher. Teacher.

## Human jumper cable.

- [Home](#)
- [About](#)
- [Projects](#)
- [Talks & Publications](#)
- [Contact](#)
- [Mission](#)

## Research

I have always been a curious child.

As an engineer who has built my career in open source communities and an educator with over a decade of teaching and curriculum development experience, I'm intrigued by the space between how hackers learn and how engineers are taught. Both open source and engineering academia require neophytes to learn complex collaborative processes in order to produce technology, but their approaches have historically been quite different; school is abstract and controlled, well-scaffolded and private – whereas open community projects are chaotic and improvisational, public and “real.” Understanding the patterns of how knowledge is spread in each culture allows us to bridge them and combine their strengths. This creates radically transparent communities of makers solving real problems for real users while being aware of how they teach their craft to new apprentices.

My job is to build worlds, both physical and virtual, where this can happen. Radical transparency means knowledge can be freely accessed and discussed by team members across all disciplines, leading to surprising insights and richer products. It also exposes the discourse of real engineering practice, allowing anyone to overhear and reflect on the stories behind our solutions. When we can overhear and be overheard, we become more able to find our own answers, our own connections, and our own routes into a field.

As a PhD student in Engineering Education, I serve as a translator between scholarly and open communities, explaining each culture to participants of the other in their native tongues and negotiating engagements where they can work together. Whether it's accompanying a senior class field trip to a hackathon or co-authoring a conference paper with a fellow open source contributor, I spend my days bridging academic research on successful communities with deep personal experience getting my hands dirty building them.

I'm a firm believer in [Open Access](#), and am in the process of making all of the results of my own research freely available. I do my best to go a step beyond and make my data, methods, and analysis open and freely forkable whenever possible.

Of course, I don't do any of this alone. Much of my research is with – and on – members of the [Teaching Open Source](#) community, a group of open source contributors and university professors who are experimenting together with student involvement in open source projects. I'm a member of the [Xroads Research Group](#) under Dr. Robin Adams, my advisor at Purdue. And I'm often working on multiple [research projects](#) at once with a mix of hackers and scholars; most are open to participation, so if you see something you'd like to get involved in, don't hesitate to [contact me](#).

Know someone who'd appreciate this post?      

## • Common topics

- [Didn't fit anywhere else](#) (1285)
- [engineering edu](#) (53)
- [eucalyptus](#) (8)
- [fedora](#) (235)
- [kinesthetic](#) (10)
- [languages](#) (7)
- [music](#) (19)
- [olin](#) (102)
- [olpc](#) (70)
- [soas](#) (24)
- [sugar](#) (96)
- [teaching open source](#) (197)
- [testing](#) (10)

## • Fresh Braindumps

- [My first film festival: Tribeca \(with reviews and spoilers\)](#)
- [Things I want to write about](#)
- [UPGRADE MEL does not accept current limitations](#)
- [Dear feminist intellectual ancestors: thank you.](#)
- [in order to not forget, and to realign](#)
- [EucaDay for Remotees: the complete guide to what happened](#)
- [EucaDay: Community session, part 1](#)

## • Fresh Responses

- Sumana Harihareswara: [on Things I want to write about](#)
- Don Davis: [on Things I want to write about](#)
- Don Davis: [on Things I want to write about](#)
- Katie Rivard: [on UPGRADE MEL does not accept current limitations](#)
- Jodi Schneider: [on Hearing aid options: down to six choices](#)