The Open Bioinformatics Foundation (https://www.open-bio.org) is a community of scientists creating open source code to solve biological problems. A yearly conference, started in 2000, provides the opportunity for in person discussion and presentation on technical work about code development and biological analyses.

In 2010, we recognized a need for a more practical hands on working session in addition to the conference and developed a two day coding session called the OpenBio Codefest (https://www.open-bio.org/wiki/Codefest). This event continued the past 7 years in a wide diversity of locations, with the most recent taking place at an Orlando makerspace (https://www.open-bio.org/wiki/Codefest_2016).

At the CSCW 2017 Hackathon workshop, I'll discuss the organization and evolution of Codefest. It initially started as a space for community members who were already collaborating remotely to sit together and work. Over time, it grew to better incorporate new members into the community by serving as a fun and open environment for sharing work and meeting like-minded researchers.

The positive things we've learned in organizing Codefest are:

- The value of collaboration over competition. Codefest has no prizes or competitive structure, and instead focuses on producing useful practical code that we can share at the associated conference and more widely through blog posts and scientific papers.

- The power of self-organizing groups. We do not pre-define the agenda for Codefest and let the attendees suggest areas of focus and then provide introductions so working groups can form. This allows newer community members to work alongside more experienced developers in areas they'd like to learn, and to allow the community to shift focus with new technologies and approaches.

- The advantage of in person discussion for developing interoperability standards. One successful outcome of Codefest have been the development of tool communication standards which allow different communities to share development resources. Like other projects at Codefest, standards creation happened organically due to the need for larger projects to be able to better to re-use analyses.

We also currently face challenges that we're hoping to learn potential solutions to:

- How to attract a more diverse set of community members. Like many programming and bioinformatics conferences, we struggle to attract a diverse crowd of attendees. As a result, Codefest can feel intimidating or unwelcoming to those outside the community. We've received universal praise that we're welcoming once overcoming that initial hurdle, but would like ways to project this welcoming attitude so under-represented researchers feel comfortable investing their time and expertise at Codefest.

- Incorporating teaching and training into the content of Codefest. As we've increasingly tried to attract new community members, we've developed the need to help integrate them into the community. In many cases, new members will be experts in some areas but not in the projects or languages under active development at Codefest. We need to develop methods to quickly get them comfortable and productive so they can contribute within a reasonably short time frame.

- Scaling events to incorporate new members and approaches. As we actively recruit new attendees we're running into the issue of figuring out how to support them at larger scale. Our approach of having a few mentors who make connections and provide orientation on projects will need improvement if we're successful in recruiting new, diverse attendees.

Attending the Hackathon Workshop is a chance to show areas where we've been successful, and to learn how to be better organizers. We hope to continue to expand and improve Codefest and related events for the open bioinformatics community.