5 dimensions of Equity, Diversity and Inclusion (EDI) in software engineering research

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I plan to be a little provocative ...

and ask your opinions at certain points
I will use the term “equity challenged”

Groups of researchers/students who might not have a fair chance due to (systemic) bias and discrimination

- Visible minorities / people of colour
- Women
- People of diverse genders and sexual orientations
- People of differing ability (hearing, sight, physical, age) and their caregivers
- Neurodiverse people (e.g. ASD, Anxiety/Phobias, ADD)
- People of different socioeconomic backgrounds
- People of different cultures / religions
- Indigenous people
- People from countries/regions that are economically or politically challenged
Some key dimensions of EDI

A. In peer review (double-blind or not?)
B. In conference attendance (mandating hybrid)
C. In the products we create
   – Considering abilities and needs of all users
D. In studies we conduct
   – E.g. studying UX in all groups
E. In recruiting students

I will focus on the first two
These are my opinions primarily

More research in this area is needed
Dimension A: EDI in Peer Review. Make author blinding recommended.

Double-blind: Currently considered golden in key SE conferences

- Reviews hence theoretically only based on merit of the work
- Ideally reduces chance of subconscious (or overt) bias

... 

- ...towards established/prestigious researchers
- ...against equity-challenged researchers
EDI in Peer Review. Make author blinding recommended. (2)

But: unintended consequence of blinding authors:

- Blinding is not always truly possible or ‘real’ in certain academic topics (including some SE topics)
  - When research is clearly localized to a university, company or geography
  - When a researcher is the only or one of a few researchers in an area
    - E.g. developer/investigator of a language/tool/method
  - Relevant PLOS blog by Hilda Bastian:
EDI in Peer Review. Make author blinding recommended. (3)

Unintended consequences of author blinding (cont.)

- Authors need to avoid self-references to previous aspects of own work
  - They may need to repeat material
  - If they don’t repeat it, the paper may get rejected
- Reviewers can’t check for self-plagiarism
- Reviewers complain that a certain author’s work is not considered, when it is a work of the author!
- Challenges when expanding/progressing:
  - Preprints/workshops -> Conferences/Journals
  - Conference -> Journal
EDI in Peer Review. Make author blinding recommended. (4)

Unintended consequences of author blinding (cont.)

- Reviewers often learn a lot from what they review and may want to follow the author’s work
  - Blinding blocks this avenue for exposure of equity-challenged authors
- Authors steer away from certain lines of work or writing papers that are hard to blind for fear of desk rejection
  - or towards venues that do not do double-blind review
EDI in Peer Review. Make author blinding recommended. (5)

My recommendation for double blinding policy in SE:

– Give authors who may be equity challenged the choice!

– In CFPs strongly encourage authors to blind papers, but don’t require it.
  • Give the reasons for blinding in the CFP
  • Ask authors for metadata stating why they declined to blind for later analysis (not visible to reviewers)

– Open review is also a trend!
  • Allow reviewers (with author’s consent) to have their name and/or the core of their review made public when papers are accepted
What do you think?

Poll (The host will run it)

1. After hearing what Tim Lethbridge has said, to what extent do you think 'encouraged author blinding' should be used instead of 'required author blinding'?
   (Single Choice) *
   - I think that reviewers should always or almost always be able to see the author's names 10%
   - I agree that blinding of author's names should be encouraged but not required 34%
   - I (still) think that the names of authors should always or almost always be hidden from reviewers 55%
Dimension B: EDI Through Mandating that Conferences be Hybrid

We know that hybrid conferences work!

- Some hate it (want in-person only)
- Some prefer online interaction

- It can be done easily (fanciness is not needed)
Online vs. in person preferences are polarizing:

<table>
<thead>
<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend all or almost all bi-modal classes in person / J’assisterais à tous ou presque tous les cours bimodaux en personne</td>
<td>30.41% 225</td>
</tr>
<tr>
<td>Attend more than half of the classes in person and the rest online / J’assisterais à plus de la moitié des cours en personne et le reste en ligne</td>
<td>15.81% 117</td>
</tr>
<tr>
<td>Attend about half in person and half online / J’assisterais environ à moitié en personne et à moitié en ligne</td>
<td>10.00% 74</td>
</tr>
<tr>
<td>Attend most classes online / J’assisterais à la plupart des cours en ligne</td>
<td>14.73% 109</td>
</tr>
<tr>
<td>Attend all classes online / J’assisterais à tous les cours en ligne</td>
<td>29.05% 215</td>
</tr>
<tr>
<td>TOTAL</td>
<td>740</td>
</tr>
</tbody>
</table>
EDI Through Mandating that Conferences be Hybrid (3)

The climate change argument for mandating conferences be hybrid: [https://stay-grounded.org](https://stay-grounded.org)

- We must reduce flying, a key factor in climate change
- It is also an EDI argument since climate change will affect equity-challenged countries and people more

Excellent papers on this:

- Glausiusz 2021, “Rethinking travel in a post-pandemic world”, [https://www.nature.com/articles/d41586-020-03649-8](https://www.nature.com/articles/d41586-020-03649-8)
EDI Through Mandating that Conferences be Hybrid (4)

The **pandemic** argument for mandating conferences be hybrid

- Likelihood of more Covid waves that will affect different countries at different times (EDI)
- Waning immunity
- Residual unvaccinated
- New variants
- Low vaccination rates in some countries (EDI)
EDI Through Mandating that Conferences be Hybrid (5)

The personal needs and availability argument for making conferences hybrid

– Some people find it challenging to travel for mental health reasons (EDI)
– People in teaching-focused universities may find it harder to find time to travel (EDI)

– Attendance will be higher and more diverse if we do not force in-person attendance
EDI Through Mandating that Conferences be Hybrid (6)

The broader EDI argument for making conferences hybrid

- **Cost**: More people from developing countries or other equity-challenged groups will attend/learn/participate
- **Health limitations**, including pregnancy
- **Family responsibilities**: Society still pushes this more on women
- **Visa issues and political concerns**: Disadvantaged groups less able to leave/enter
EDI Through Mandating that Conferences be Hybrid (7)

I believe in coming years, conference sponsors (IEEE, ACM) will demand hybrid access be standard

– In-person-only conferences will be seen as elitist
– Conference organizers should take the lead NOW

But the pattern of online attendance needs working out:

– A) Resist: In-person by default, online by special permission and/or paying similar fees to in-person
– B) Neutral: Moderate fees, no justification needed
– C) Embrace: If you want to be in person, register by a deadline (so meal numbers can be pinned down), otherwise online by default at low cost.
What do you think?

Poll (The host will run it)

– Poll 2: After hearing what Tim Lethbridge has said, to what extent to you think that conferences should be required to provide an online option for attendance on a permanent basis?

• 17% I think that we should go back to in-person only attendance at major conferences after the pandemic is over
• 7% I am neutral on this
• 76% I think we should permanently allow some form of online attendance (i.e. conferences should be hybrid)