

# Improving Advising Relationships Between PhD Students and Faculty in Human-Computer Interaction

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## ABSTRACT

Advisor-advisee relationships between PhD students and faculty are vital to research, but advising dynamics can be challenging for both student and advisor. Though advising can involve egregious problems such as sexual harassment, we focus on what might be less serious but more common issues such as exploitation, unprofessional behavior, mishandling of credit, and inadequate communication. While problems can be caused by advisor or advisee, the power imbalance exacerbates problems for PhD students. In any case, open discussion about PhD advising is rare. In this panel, we hope to start a much-needed conversation about PhD advising to raise awareness within the SIGCHI community about common advising problems; and to begin brainstorming solutions that faculty, administrators, and PhD students can implement.

## CCS CONCEPTS

• **Human-centered computing** → **Human computer interaction (HCI)**.

## KEYWORDS

Advising relationship, power dynamics, mentoring, academia, abuse of power

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## 1 INTRODUCTION

This panel aims to spark a discussion within the human-computer interaction (HCI) community about relationships between PhD students and their advisors.<sup>1</sup> Our hope is to surface common challenges and to begin a conversation about how to address them.

Research suggests that across fields, advisor-advisee dynamics can present challenges for PhD students [1, 5]. One survey study conducted by *Nature* with 5,700 doctoral students worldwide, concluded that “Mentorship contributed more to respondents’ overall satisfaction with their PhD programme than did any other factor” [14]. Almost a quarter (23%) of the participants replied that they would switch advisors if they could. In another study, 24% of PhD students at a Swiss university reported experiencing some kind of abuse by faculty [6]. Abuse by advisors is sometimes called “academic bullying” [9, 10], and it includes a range of behaviors such as sexual harassment, racial microaggressions, coercion of non-academic tasks, pressure to meet unreasonable expectations, etc. [3]. And, even short of abuse, faculty may cause problems for their advisees by showing subtler behaviors, such as not providing enough time to their advisees; being inconsistent with guidance; neglecting poor lab dynamics; or failing to keep commitments. Indeed, studies show strong relationships between advising and PhD students’ mental health [3, 8, 11] and success in the program [4]. One recent qualitative study within HCI also confirmed that graduate students perceive issues in advising relationships as a key stressor [12].

Meanwhile, advisors also experience problems. One study within the field of counseling psychology finds that advisor satisfaction depends greatly on their perception of the advisee [7]. While advisors are full of praise for advisees they are happy with, they describe others with words such as “anxious, presumptuous, rigid, lazy, self-centered, irresponsible, avoidant, dependent, [having] poor work habits, and [lacking] clear boundaries.” One participant described the extensive revising required of their advisee’s writing as “tortuous.”

However, while the problems may go both ways, the ground is not level. There is a fundamental power imbalance between advisor and advisee that makes problems more challenging for PhD

<sup>1</sup>Our topic may also be relevant to other mentoring relationships such as between interns and their manager-mentors, or between junior and senior researchers. This panel’s focus, however, is on PhD advising, where the unique context of the university, of funding arrangements, of tenure, and so on, often gives rise to genuinely unique situations.

students [2]. While many advisors appear comfortable expressing issues they face in their advising relationships [7], PhD students often do not due to fears of faculty’s power over them. They may face significant consequences [4] ranging from advisor resentment to retaliation: dismissal as advisees, loss of funding, blocking of career progress, and so on.

Surprisingly for a topic that is so central to research as a profession, there is very little research about PhD advising. When we conducted full-text searches of the ACM Digital Library for phrases such as “PhD advising,” “PhD student advising,” “doctoral advising,” “PhD student mentorship,” “advising relationship,” and so on (with PhD spelled as “PhD,” “Ph.D.,” and “phd”), they either returned 0 results, or the few results were not primarily about advising.

This panel has two goals: First, we aim to raise awareness about a wide range of common, problematic advising dynamics. Second, we hope to start brainstorming ways to improve advising in our community. Towards these goals, the panel is designed to address questions such as the following:

- What are some common patterns of problems in advising relationships? Crimes and blatant abuse are important to address, of course, but often they are understood as general phenomena. What are subtler problems that may benefit from more visibility?
- When do academia’s incentives not support good advising? How can we make incentives compatible with good advising?
- What can students, faculty, and administrators concretely do to improve advising relationships? For example...
  - What institutional changes would reduce the incidence of advising problems?
  - What would enable PhD students to be more proactive in reporting problems and/or seeking help?
  - What kinds of mechanisms would enable faculty – especially tenured faculty – to be held accountable (especially for problems that do *not* rise to the level of a prosecutable offense)?
  - How can expectations between students and faculty be better negotiated?

These issues likely arise in fields outside of HCI, and it could be argued that a panel like this is better held in an event on, say, higher education. However, given the scarcity of discussion about advising in any discipline, we feel our community is a good place to start; we are engaging in the spirit of “think globally, act locally”—whatever the generalizability of the issues, problems within HCI ultimately need to be addressed within our own community. Finally, we suspect that the interdisciplinary nature of our field exacerbates some problems, making them more visible and possibly more common in HCI.

## 2 PANEL CONTENT AND FORMAT

The panel will be held in a hybrid format to enable broad participation. Some of the panelists will be present in person; some will be online.

Given the limited amount of time available, we will seek to guide the panel conversation toward the most relevant topics. Those topics will be determined by seeking input from panelists and from other PhD students ahead of time.

### 2.1 Before the Panel

Each panelist will independently answer a questionnaire about advisor-advisee dynamics, as outlined below.

- What do you believe are the most common problems in advising that adversely affect PhD students?
- What do you believe are the most common problems in advising that adversely affect faculty?
- Faculty have more power than PhD students in the advising relationship. What uses of that power are justified or understandable? What are not?
- Consider the above questions with respect to issues such as...
  - Deciding on research questions
  - Choosing collaborative research projects
  - Deciding authorship
  - How the PhD student spends their time
  - Deciding on how to work together (e.g., asking for and giving feedback on drafts, frequency of meetings)
  - Navigating a co-advising relationship
  - Lab-mate dynamics
  - Funding for the PhD student
  - Ending the advising relationship

Prior to the panel, we also hope to deploy a brief survey to PhD students within the SIGCHI community to further inform the panel content. We will publicize the survey via PhD program mailing lists and social media (e.g., Facebook, X, Mastodon) before the panel. Then, we will use the results to generate themes for the panel questions, and share them with the SIGCHI community. (In case we are unable to run the survey, we will rely on input from the panelists, who represent both student and faculty perspectives.)

Using input from the panelists and survey respondents, the organizers will devise a set of questions for the panel (potential questions are listed in Section 2.2). All panelists will also have access to the responses and be asked to provide feedback on the questions.

### 2.2 During the Panel

The overall panel structure will be as follows: 1) introduction of panelists and moderator, 2) brief overview of panelists’ views of advising relationships based on the questionnaire described in Section 2.1, 3) pre-arranged questions posed to panelists, 4) Q&A with the audience, 5) closing remarks. We expect the panel to last 80 minutes.

For the first 10 minutes, the moderator and panelists will introduce themselves while waiting for the audience to settle in. The moderator will periodically check and engage with the Zoom audience with the help of one student volunteer.

For the next 5 minutes, the moderator will give a brief overview of the panelists’ answers to the questionnaire described in Section 2.1, and explain to the audience that they served as a basis for the panel questions. There will be a link and QR code to a website that visualizes the results so that the audience can access them. Over the next 5 minutes, the moderator will ask each panelist to take a minute to briefly note how they reacted to the pre-panel responses from other panelists and survey participants. This segment is intended to bring out points that faculty did not expect from students, and vice versa.

Then, for the next 30 minutes, panelists will answer a series of pre-arranged questions, selected to highlight more common issues. The moderator will introduce each question, and ensure that each panelist has a chance to chime in. For example, the potential questions would look something like this:

- What are some kinds of problematic advising dynamics that the community should be more aware of?
- What do you believe are the fundamental reasons behind problematic advising?
- What are concrete actions that PhD students and faculty can take to improve advising relationships? What are best practices for handling cases of conflicts, microaggressions, and other toxic behaviors (from either side)?
- What are steps that SIGCHI and institutions could take to cause a long-term change to address problematic power dynamics in advising? For example, there are tensions existing at the university-level, caused by factors like different funding models—which create a zero-sum game for faculty and graduate students.
- What degree of "professionalism" should be expected from both sides, and what are best practices for finding appropriate professional/personal boundaries? For example, it is not necessarily an advisor's duty to resolve PhD students' personal life issues, but they can have an effect on the advising relationship (e.g., mental health).
- How do we address the issues of advisors who are women tending to take on more emotional labor?
- When and how should an advisor and/or student decide to end a mentoring relationship that is not mutually beneficial?

Next, panelists will answer questions from the audience for 20 minutes. The moderator will choose among questions asked by the online audience and those in the room, taking care to ensure a good hybrid experience for all.

During the last 10 minutes, each panelist will be asked to give a 2-minute closing statement, with a focus on what they think are the most important steps moving forward—which will include both personal endeavors, as well as changes that the SIGCHI leadership or community as whole could be involved in.

### 3 PANELISTS AND MODERATOR

The panelists all have a sincere interest in improving advising dynamics. Two panelists are PhD students and two are faculty members. The moderator is a faculty member and advisor to one of the student panelists.

- **Jane Im (organizer, panelist, attending in-person)** is a PhD candidate at the University of Michigan School of Information and Department of Computer Science and Engineering. She had multiple advisor changes during her PhD. As the PhD student representative on her school's Diversity, Equity & Inclusion Committee, she led discussions about difficulties PhD students faced in advising relationships. In her research, Jane designs and builds social computing systems grounded in consent. She is a Meta Research PhD Fellow and a Barbour Scholar. Before starting her PhD in Michigan, she was born and raised mainly in South Korea.

- **Kentaro Toyama (organizer, moderator, attending in-person)** is W. K. Kellogg Professor of Community Information at the University of Michigan School of Information and a fellow of the Dalai Lama Center for Ethics and Transformative Values at MIT. He co-founded and served as Assistant Managing Director of Microsoft Research India, where he helped to establish a thriving internship program that hosts over 120 research interns each year. In his book, *Geek Heresy* [13], he casts mentorship as the ideal model for global development. He currently advises 8 PhD students.
- **Himanshu Zade (panelist, attending in-person or remotely)** is a PhD candidate in the Human-Centered Design and Engineering department at the University of Washington. He has been a mentor to 10+ graduate and 10+ undergraduate students. His research focuses on designing online media platforms that help users understand the socio-technical opacity of misinformation.
- **Steve Oney (panelist, attending remotely)** is an Associate Professor at the University of Michigan School of Information. At Michigan, he has advised seven Ph.D. students, including three current students. His research focuses on enabling and encouraging more people to write and customize computer programs by creating new programming tools and exploring usability issues in programming environments.
- **Pamela Wisniewski (panelist, attending in-person)** is an Associate Professor and the Director of the Socio-Technical Interaction Research (STIR) Lab at Vanderbilt University. She is an advocate for women and minorities in STEM who believes in leveraging whole person mentorship with radical candor to instill a growth mindset to set her students up for long-term success. She received the William T. Grant Mentoring Grant for mentoring Scholars of Color and the William R. Jones Outstanding Mentor Award from the Florida Education Fund. She has worked with hundreds, if not thousands, of college students and teens on her nationally and internationally recognized research on adolescent online safety.

## 4 EXPECTED OUTCOMES AND CONTRIBUTIONS TO SIGCHI

We hope the panel will kick-start a larger conversation about advising in HCI and lead to concrete changes down the line that improve advising relationships for PhD students and faculty. Specifically, we anticipate the following outcomes from the panel:

- Clearer understanding of differences in perception between PhD students and faculty with respect to advising relationships.
- More awareness of various problematic advising behaviors that are rarely discussed in public fora.
- Sense for the potential changes that PhD students, advisors, and relevant institutions could aspire to improve advising, including specific ideas for the SIGCHI community.

Beyond what is discussed in the panel itself, we are planning to publish an edited transcript of the panel as a Medium blog post; and write an archival paper in a SIGCHI publication, perhaps as a poster or opinion piece, that summarizes key takeaways from the

panel. The goal is to use the momentum from the panel to drive an ongoing discussion about advisor-advisee dynamics in HCI.

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