

Giving a Scientific Talk **Research Seminar – Fall 2020**

If you ask 10 scientists for detailed opinions on what makes a good or bad scientific talk, you're likely to get about 15 different answers. Everyone who has attended a bunch of scientific talks has been exposed to behavior they have found distracting, upsetting or unprofessional; my theory is that since we come from a variety of backgrounds and have been exposed to a varied set of "presentation sins", the particular behaviors that bother each of us differ depending on the particular annoyances that we've had to suffer through.

Although presenting our work to a technical audience is part of the job for nearly all professional scientists, most of us spend far more time thinking about the nature of our science than how to present it. This makes sense – for every 15 minutes you spend giving a talk, you probably spend hundreds of hours in the lab/on the computer working on finding out the information that ultimately you want to share.

Even though it may be unsettling to many of us, there is more to a scientific presentation than the science content. None of us got into science because we secretly wanted to do marketing, but the fact remains that we're communicating our results to humans and, as such, we are best served to customize our content and delivery so that the people listening get the message we want to get across. This is a skill, and – like all new skills – it takes practice to master.

Throughout this semester, you'll be giving a few (brief) talks to your classmates. Many of you likely do not have a lot of experience with this process; even those of you who have given scientific talks a few times before likely do not do this sort of thing every day. The idea behind this is that most of you will be talking science for a good chunk of your professional careers; we want to give you an opportunity to practice this skill and – when necessary – point out some habits you already are developing that you may want to reconsider.

Before we do this, it makes sense to at least think about the nature of giving talks in a holistic sense. That's the reason for this assignment.

Prior to class on September 24th, you are to read the following four documents:

- Advice on Giving a Scientific Talk (D.W. Kurtz)
- My Presentation Philosophy (Joseph Shoer)
- Ten Secrets to Giving a Good Scientific Talk (Mark Schoeberl and Brian Toon)
- How *NOT* to Give a Scientific Talk (Michael De Robertis)

Each of these documents are linked to on the course webpage.

As alluded to in the introduction, there will be some discrepancies between what these authors say – but you’ll also find some substantial agreement. These four documents will become the focal point of our discussion in class on October 1st. To ensure you do read these ahead of time, you are also asked to come to class with typed answers to the following. (Don’t spend forever on this, but a couple of sentences per question is appropriate).

1. According to Kurtz, what is it you should never trust?
2. According to Kurtz, why should you avoid talking from behind a podium?
3. According to Shoer, should you derive important results in your talk? Why or why not?
4. What do you think are the 3 most important lessons to take away from these four documents?
5. Name/describe at least 3 major points of agreement between two or more of the sources.
6. Name/describe at least 3 points of disagreement between the sources.
7. Are there any points made in any of these documents you disagree with? Which one(s) and why?
8. Are there any points made in any of these documents that you don’t understand the rationale for? Which one(s)?