Guidelines and Checklist for Giving Presentations

Being able to give an effective technical presentation is an extremely valuable skill for an engineer to have. However, it takes a lot of practice to hone those skills. As you begin to give presentations in our group, and eventually for job interviews and/or presentations at national conferences, here are some general guidelines that you should follow:

General Guidelines for giving a Professional Scientific Presentation

- **Know your audience-** Who are you speaking to, and what is their background? Knowing this is critical to tuning your language, deciding what to include in introduction slides, and deciding what level of detail you will go into for the body of your presentation.
- **Write out an outline –** Before you start creating slides, write out a short outline that lists the order of topics and slides to be included in the presentation. This exercise can be time saving and invaluable for making sure that your talk is an appropriate length, follows logically from one slide to the next, includes all of the key messages you want to convey, and has an appropriate balance between motivation/background slides and the body of the presentation. Usually, the introduction & background slides shouldn't make up any more than 30-40% of the presentation.
- **1 slide = 1 minute -** A general rule of thumb is that one slide should take about 1 minute of presentation time. If it takes you 3-5 minutes to get through a slide, then you either have way too much information on that slide, or need to practice describing its content more concisely.
- **The majority of your slide should be figures or images-** Minimize text and equations. You should almost never have an entire paragraph typed into a slide. Instead, write down short bullet points that provide a concise description of what you are trying to convey in that slide. Your slides are meant to be a visual guide for your presentation, not notes for you to read off of.
- **Minimize the use of animations-** Animations can be time-consuming to put together, and can cause problems if the version of Powerpoint that you used when making your presentation is different from the one used during presentation. Instead of using powerpoint animations, simple changes can be achieved with multiple slides. This allows the presentation to be saved into pdf format, which is more stable but doesn't technically allow for animations.
- **Avoid dark slide backgrounds-** Avoid dark backgrounds, which can be distracting and make it difficult to read text. I strongly recommend use of a white slide background, which generally has a much cleaner and professional look.
- **Speak clearly and face your audience-** Can your entire audience hear you? At the start of your talk, ask if everyone can hear you clearly. It is okay to glance at your slides to remind yourself of slide content, but the majority of the time you should face your audience during a presentation. This will help ensure that your voice reaches the back of the room, and is more professional.
- **Practice, practice, practice**- The more you present, the better you will get, and the more confident you will be. If presenting to outsiders and/or at a conference, make sure that you have practiced the talk (either to yourself, friends, and/or groupmates) enough times that you can complete the talk in the allotted time frame. When preparing, do not worry about memorizing every sentence you will say (this will make you sound like a robot); instead, make sure that you have memorized the order of your slides and the main talking points that you want to make for each slide. Transitions between slides are important; make sure that your slides and thoughts are in the proper order.
- **Answering Questions-** When answering questions at the end of your presentation, i.) don't feel rushed to give an answer; take a few seconds to think before responding, ii.) ask the questioner to elaborate on the meaning of their question if you are not sure, iii.) answer the question as directly and concisely as you can; avoid rambling or indirect answers, and avoid getting caught up in insignificant details.

Checklist – Before giving a presentation, make sure you can check off these items….

- **Font Size:** Can all words on your slides be seen from the back of the room? Do you need to squint to read words on your laptop screen? If the answer to either of these questions is yes, you need to increase the font size of writing on your slides. A good rule of thumb is to avoid using any font size smaller than 16. An exception is references, for which you might use 12 or 14 pt. font.
- **Number all of your slides-** (go to insert -> slide number in Powerpoint) this allows people to refer to specific slides that they have questions about at the end of the talk.
- **Cite your references-** If you are including any image, figure, or fact from another source, you need to cite that source by including a citation at the bottom of the relevant slide, along with an appropriate marker tying that reference to the appropriate fact or figure. (e.g. [1.], or [i]). Cited journal articles should include the lead author's name, an abbreviated Journal title, the volume, and the year of publication. e.g. B. James, et al., J. Am. Chem. Soc., 45, (2015).
- **Figure captions-** Every single figure should have a caption that provides a very short description of what is being shown in that figure. Put the figure citation in this caption if the figure is copied from another source.
- **Figures-** If you have multiple curves on the same plot, make sure that you can visually distinguish between those curves (use colors or patterns with high contrast), and that there is an appropriate label or legend entry for every curve that clearly tells the audience how that curve is distinguished from the others.
- **Experimental or modeled conditions-** If a figure shows experimental or modeled results, are important operating parameters and sample information included? (i.e. electrolyte, light intensity, sample type, etc).
- **Consistent style-** Be consistent with font style (e.g. Arial vs. Times New Roman) and in font style between different parts of the presentation. e.g. if the font used for the slide heading of slide 1 is underlined, centered, and font size 28, then it should be this way for every single slide.
- **Check spelling and grammar**
- **Acknowledgements slide (for research presentations)-** Include an acknowledgments slide in which you list other students who have helped you with training or conducted any of the experiments or modeling work that was included in your presentation. Also make sure that you acknowledge the funding source or agency if you are working on a funded project.