Checklist for presenting Math-Stat-ML papers

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Some personal suggestions (via accumulated wisdom) for my own students (not broad advice):

- The level of technical depth depends critically on talk length and audience. The aim of a talk is to convey motivation, intuition and some key conceptual ideas, leaving the rest to the paper.
- Do not have more slides than minutes. Number and/or title each slide for easy reference during questioning. Titles should be full phrases or sentences (generic or nonspecific titles sometimes serve no purpose).
- Avoid Beamer unless you’re an excellent speaker: the mode of inputting content is through typing LaTeX, and as a direct result, most (bad) math-stat speakers pack every slide with text and math formulae that nobody reads. I recommend Keynote (Mac): there is more freedom in visually organizing the page (rather than top to bottom in Beamer). In the latest version, Command+E allows using LaTeX within the editor (no need of LaTeXiT) in the same font as the text. Equations can have color, and can be edited by double-clicking.
- Animations (mainly appear/disappear) are critical to allow content to appear one block at a time, even within a single complex figure or formula. In Beamer, make use of \pause (don’t display a daunting page all at once).
- Eye contact is critical to maintain attention. Do not read from your slides, or have your back to the audience. Know your slides: do not be surprised by them, or wonder in real time what you wanted to say.
- For a seminar talk, have at least 15 minutes before the talk to set up your laptop (technical glitches are frequent), clicker (always use one), power cord (always carry one), water bottle (critical for longer talks). Have your slides either on a pen drive, or on a cloud service like Dropbox or Google Drive if your laptop fails.
- Request a microphone (even if you think your voice is loud): it helps people stay awake, those who are hard of hearing, and keeps your voice louder than people who type on their laptop or talk to neighbors.
- Ask the audience to feel free to make clarifications during the talk, leaving philosophical questions for the end. If someone (repeatedly) does not comply, respectfully say that you are happy to discuss offline.
- Sometimes, you may wish to paraphrase an audience member’s question back to the them, both for the sake of others who did not hear, to make sure you understood the question correctly, and to buy thinking time.
- The biggest mistake you can make is TMI (too much information). Your null hypothesis should be that 90% of people don’t care about what you do, and will not read your paper. These people just want to understand things at a high level, and get glimpses of details. They want to understand why you’re studying this problem, why you took the approach you did, etc. Don’t present general-but-complex assumptions (use simpler sufficient conditions), don’t present the most general theorem statement unless it is succinct.
- Creating effective talks boils down to understanding human psychology: think about what the audience will want to know, what might confuse them, what might potentially interest them. If these questions are focused on yourself instead of the audience, the only person who will like the talk is yourself, not the audience.
- The word “monotonous” literally means “the same tone”. Varying pauses and changing tone (when done appropriately) can greatly increase attention spans and decrease the amount that people’s minds drift away.
- Work on improving your pronunciation. Some people speak very quickly and others are dreary. Learn the pace at which people can understand and process all the words of your sentence.
- Avoid overconfidence, exaggeration or bragging about your own work. Over-humility or beating up on yourself or your work is also counterproductive. Be confident, direct and honest about your work.
- Humor is good if it’s natural and you can pull it off confidently. Forced jokes can backfire, please avoid.
- Try to stick to about one new idea per slide. That should be the title (top) or takeaway message (bottom).