Thoughts about giving talks.

When you come to give a talk you are creating an interaction between your audience, your material and yourself as a presenter. To give a good talk it is very important to think first about your audience and what you want them to get from the talk, then about the material and how you will organize that to achieve your aims for the audience and lastly about yourself as a presenter, your strengths and limitations and the resources and presentation tools that you have to hand.

Think about what is the principal idea or concept that you want to convey. Try to summarise the talk in a single sentence. Think about what the overarching theme of the talk will be. You want everyone in your audience to come away from the talk with this idea or theme clearly lodged in their mind.

Once you have identified the main idea or theme of your talk, then you can start to build the talk around it. In a short talk (less than about 20 minutes) everything in the talk should be constructed tightly around this idea. In a longer talk, depending on the complexity of what you are dealing with, you may have room for digression but the digressions should never swamp the main idea.

Think about the balance between proofs and examples, between rigour and giving an intuitive understanding. Do you want to focus on the careful derivation of results or on how these results can be applied? This is to some degree a personal choice and will depend on what appeals to you mathematically. If you speak about the aspects that interest you, then you are more likely to give a talk that is interesting to your audience.

Think about how you will present the talk. Will you use black/white boards or the visualiser or the data projector? You may use more than one, but remember that swapping between media takes a little bit of time and may interrupt the flow of the talk so that you should not do this too often. Whatever you do, the mode of presentation should enhance the material rather than make it more difficult to put over.

When using the black board, write your notes for the board exactly as you want them to appear in the talk. If you want to write notes about what you need to say write them on the same page but in a different colour to your board notes. Writing on the board takes time, so make sure that you have no unnecessary material in your board work. Make your board notes as lean and mean as you can without losing flow. Plan how you are going to use the board.

When using PowerPoint or beamer slides, avoid using too many words or too many equations. You want your audience to focus on what is important and to listen to what you are saying and not to be distracted by lots of visual material to read and adsorb. What you have on the slide must support what you are saying to them and not distract from it.

Do not “travel hopefully”. It really is “better to arrive” when giving a talk. Plan your talk and test your timing and make sure that you can make your main point successfully and finish on time. If need be, cut stuff and keep cutting until you are certain that your talk will fit into the time available. If you are unsure how it will go on the day, have a little bit of extra material or a some material that you can cut as you go to make sure you stay within your time slot. It is better to be ruthless and present a well-structured talk with a clear
point than to seek to include more material and run over time. This is where it really helps to be clear on the main point that you want to make.

You can cover a lot of ground even in a short time if you make sure that you say everything once and do not repeat yourself unless you have specifically planned to do so for emphasis. On the other hand, you do not need to talk nonstop. Sometimes a few moments silence to let your audience adsorb a point is helpful.

Finally, practise, practise, practise. Not just the whole talk but bits of it. Ideally you want the words of your talk to be embedded in you so that when your mind starts to panic, your mouth keeps on going until the mind settles down again. Talk through sections of the talk in the shower or while you are walking to the station. Wave your arm around in front of a virtual blackboard while you are waiting for the kettle to boil. Do whatever it takes.

You should also practise the whole talk several times and in front of an audience at least once. Rope in your friends and members of your family to listen and to give you feedback. They may not know the maths, but they will be able to give you some idea of how the talk is coming across.

Outstanding talks have an “iceberg” quality where 90% of the work is below the surface, but that hidden 90% supports the visible, shining part that you see. That hidden work is not only reading and understanding the material of the talk, but also putting time and effort into thinking about structure, content and focus as part of the preparation of the talk.