Presenting science

Çigdem and Ken pose on the cover of their book, Ken wearing an ATLAS tie!

When you work in a large collaboration full of busy meeting-saturated minds, being able to present your work clearly and concisely to one another and to the wider world is crucial. A new book, written by senior physicist Ken Peach and ATLAS physicist Çigdem Işsever, is a guide packed with practical advice for speakers.

"We wanted something that people could read on a long train ride … something they could just grab and quickly read comfortably within a day," explains Çigdem.

She and Ken teach a communications class for first-year particle physics doctoral students at Oxford University, and decided to write the book after struggling to find a suitable companion text to suggest to their students. After years of enduring bad talks, and seeing the same basic mistakes repeated over and over again, Çigdem decided enough was enough.

"Even really senior people can make these mistakes. You sit in talks that are basically not readable, not understandable, where the speaker is in his own world and doesn't care about what the audience thinks or feels. It's just really frustrating," she says, adding that this can ultimately jeopardise people's career chances. "It will bite you," she assures, "so it's essential to develop these skills."

The book tackles every aspect of preparing for a talk, which begins with scoping out the audience and venue: "This defines what you have to aim for with your talk: the length, your dress code, everything," and moves on to the overall content of the presentation: "Many talks end up not really useful because they completely miss the audience or they talk about things which the [event organisers] didn't want to hear."

The structure of the talk is next on the list, before the authors begin cutting Powerpoint presentations down to size, quite literally. The particle physics tendency of stuffing slides with information – so that they are complete and understandable to people who miss the talk but access the slides later on – does the audience a huge injustice, says Çigdem: "We feel that you should pay tribute to the audience who made the effort to show up to your talk … [they] should be the higher priority."

The trick to doing that, the authors say, is to keep it simple. The slides should be there
to aid the audience and not the speaker, and should therefore be as easily digestible as possible. "Don't clutter them with text or unnecessary information," Çigdem cautions, "and if you have a plot on your slide – describe it. Anything you put on your slide should be there because you want to talk about it, otherwise it just distracts the audience – it's another thing they have to process whilst trying to listen to the speaker."

The authors transpose the BBC's motto, 'To inform, to educate, and to entertain', as the goal of any talk, but are careful to handle that tricky 'entertainment' side with caution. "If you just follow your spontaneity and make a joke, you can end up in big trouble," Çigdem warns, as well as urging speakers to never, ever put themselves or anybody else down before an audience.

The book gives straight-talking practical advice right down to the level of where to place the microphone, how to use a laser pointer effectively, how to position yourself to the audience, how to recognise and counteract the drawbacks of your own personal style (for example, if your voice doesn't carry well), and how to deal with nerves.

"As a young student, giving talks can be really daunting, especially if you feel like you're not an expert on something. You've got to get over these uncomfortable feelings to give a talk in front of a big audience."

Preparation, preparation, preparation is the book's key take-away message. And that's more preparation than you might think. This is commonly hugely underestimated, and the authors advise that you should assume a preparation time of 10 times the length of your talk. The book, available from Amazon now, is aimed at any scientific area but, says Çigdem, "I'd even go beyond that – it's useful also for any field."