We asked our student members about scientific lectures. Based on the detailed and constructive comments, here’s a summary of the elements that younger researchers believe make the best lectures educational, engaging, memorable and inspiring.

**Introduction**
The speaker first introduces the area of research and puts their work into context, briefly explaining their work at a level that a first year PhD student could understand. They might recommend one or two useful publications on the subject for further reading. They summarise the key points they will discuss.

**Clear speech**
The speaker speaks slowly and clearly; this is especially important for listeners whose first language is not English.

**Explanation and examples**
The speaker explains rather than just describes the data, such as its context, the methods used, their interpretation and what they believe to be the impact and significance of the results. They also use specific examples to illustrate their points.

**Simple, linear structure**
The talk has a clear, logical, linear structure without jumping between different concepts and ideas, i.e. it ‘tells a story’. Transitions between different points are made clear.

**Engagement with the audience**
The speaker engages with the audience and addresses them directly, using good presentation techniques such as humour, movement across the stage and eye-contact. They make use of interesting visuals such as graphics, illustrations or video.

**Slides: less is more**
Slides are used for illustrative purposes to show selected data only. They are simple and minimalist without too much text and are not overcrowded, so that listeners are able to listen rather than read.

**What makes an outstanding scientific lecture?**
(aside from really interesting data)

**Good timing**
The talk and accompanying slides are tailored to the time slot, and the speaker presents only as much data as there is time for, allowing enough time for questions at the end.

**‘Take home’ message**
The speaker summarises the main points they have discussed and repeats their fundamental findings and conclusions. If possible, they provide a simple ‘take home’ message to the listeners.