

Some guidelines for S&D 3 (taught by Dirk Metzler and Benedikt Holtmann)

(1) Why discuss papers with your peers?

As a researcher you get most of your knowledge from the primary literature and from presentations by peers. You therefore have to train your abilities to extract knowledge from scientific papers and presentations, and to critically evaluate this knowledge. We EES teachers believe that the S&D format is particularly effective at this.

Whenever you read a paper, your mind will consciously or unconsciously work on it and evaluate its content. This intellectual work can be expressed in the form of questions such as: Do I understand all of the content of the paper? If not, which issues remain unclear? What are the major achievements of the paper? In which way does it go beyond previous work? Do the paper and/or the described research have any weaknesses? If so, which? Does the paper point at new directions of research? Is there a connection to general questions or bigger issues that have not been touched upon by the authors?

It is possible to find the answers to some of these questions all on your own. In most cases, however, you will mutually benefit from exchanging your thoughts and ideas with peers.

(2) Presenter

General: The presenter is expected to aspire at fully understanding the paper. This very often requires that *additional papers cited in the text have been read* (or at least consulted) by the presenter. You should *also look for newer publications that refer to the paper* and give novel insights. This is especially important for the long presentations, where it sometimes may be in place to include some of this additional information. You need to know much more about the topic of the paper than you will be able to say during your presentation. During the discussion, whenever there are questions concerning the basic understanding of the contents of the paper, the presenter will be asked to answer these in the first place.

You should use the teacher as a resource, in particular if there are issues that you do not understand even after you have worked hard for solving them on your own. You should meet with the teacher to discuss open questions. This should happen at latest in the week before your presentation.

The introduction is a very important part of any presentation. You need to *make clear to the audience what is important and interesting about the paper*. The major part of your presentation should *lay out the central ideas and achievements of the paper*. You need to *be selective* – you don't have the time to talk about everything that is in the paper.

Short presentation: Duration 5-10 min. Your main job is to *summarize the major content of the paper*. Everything needs to be *brief and condensed*, including the introduction. This can be more challenging than preparing a long presentation. At the end you may want to point at issues that would be worth discussing.

Long presentation: Duration 20-25 min. You are expected to have a better overview over the topic than your peers, which requires that *you have read more than just the paper you are presenting* (you should cite these sources when you mention them; after the discussion you may inform about which other papers you read and how helpful they were). With this in the back you can spend more time on the introduction and explain why the topic is important and/or interesting. You have time to present some details of the results/methods/ideas but you still need to be selective. 20-25 min go over very fast. You may want to conclude with a summary of the major results and their interpretations and an outlook on possible discussion points.

(3) Structure of the discussion

The first part of the discussion is for questions about things that have not been understood. Here, the teacher may fill in with questions about particularly difficult issues to make sure that everybody fully understands the content of the paper. Once everybody is on the same page, the remainder of the discussion should lead to a critical appraisal of the paper and address more general issues that go beyond the specifics of the paper (see example questions under point 1 above).

(4) Audience/Discussion group

It is absolutely a must that you have read the paper. You are expected to ask questions about things that you do not understand (both in the presentation and in the paper itself). In addition to questions concerning the basic understanding of the content, you must prepare at least one further question or statement that contributes to the discussion. You are also expected to actively listen to each other. Try to understand what your peers say (let them explain again if you don't understand!) and try to address their statements.

(5) Discussion chair

The discussion chair opens the discussion, leads it and terminates it. Leading the discussion means that you influence who is speaking and for how long. You may at times allow spontaneous discussions and at other times tightly control who is allowed to speak and in which order. You can steer the discussion onto something you or others find interesting/relevant and steer it away from unproductive areas or unimportant details. You may want to activate shy members of the discussion group and tone down dominant ones. You should try to reanimate the discussion when it fades out too early. This can be done by asking questions or by formulating provocative or controversial standpoints.

It helps the discussion if everybody is aware of the results so far, of what is still controversial and which issues still remain to be discussed. Don't hesitate to use the whiteboard or a flip chart to visualize these points. Before you terminate the discussion you should summarize the major results of the discussion.

Preparation: As discussion chair you are expected to prepare yourself for your task. In particular, you may think about which opening sentences you want to use and you should be prepared to animate a slow discussion with questions and/or controversial statements. You *should also have prepared at least a couple of questions* that could stimulate a discussion on a more general issue related to the paper. You may not need to use any of your prepared material (since everybody else is also expected to prepare questions), but don't count on this!

(6) Feedback by teachers and students

Teachers participate in the discussion as peers. They give feedback to the presenters and discussion chairs on both aspects. Students also give feedback to the presenter and the discussion chair. Feedback should be honest and critical, but also polite, modest and constructive.

(7) Grading

We will grade your long presentation (40%), your short presentation (25%), your performance as a discussion chair (10%) and your degree of preparation and effort during the discussion (25%).