Abstract

This tutorial will explain the key elements in preparing good “research reports”, including theses and especially journal papers, and conference presentations, including lectures and posters. Our goal is that our presentations should be easy to understand.

The critical elements of each section of the research report will be reviewed, and content, organization, and style conventions will be discussed. The research report should be centered on a well-defined “research question”. The Introduction should include a clear gap sentence and statement of purpose. The Methodology section must provide sufficient detail for duplicating results elsewhere. Most results are presented in figures and tables that must be designed to tell your scientific story. They are summarized in the text by location, presentation, and comment sentences. We must differentiate between results and interpretation. The Discussion is organized from narrow comments to broad implications. Appropriate language expresses the relative certainty of explanations, i.e. from speculation to proof. The Conclusions must summarize the key results and their implications and answer the “research question”. The Abstract must be informative and not merely indicative.

The key points in conference presentation are choosing material to fit the stated time frame (rather than trying to squeeze several years work into the available time), preparing readable graphics, and rehearsal. To successfully lecture, the speaker must control the tone and amplitude of his/her voice, and maintain eye contact with the audience (which necessitates not using a laser pointer). Posters optimally serve as a locus for one-on-one discussions with colleagues who are most interested in your work. The presenter must be present at the poster, and be proactive in initiating discussions. The most important function of conferences is meeting your colleagues for informal discussion. Accordingly, attendees should well utilize coffee breaks, meals, and social events.