is generally the person who did the majority of the work and receives the majority of the credit. As alluded to in the syllabus each of you are required to be first author on *at least three* reports. Each lab will be graded on a scale of 100 and all co-authors will receive the same grade. *Except* that all authors other than first author will have the lab contribute to their overall grade only $1/N$ as much as the first author (N is the total number of authors). The list of authors and its order is what will determine the weighting of your grades so, every author should be sure to be included properly.

THE SHORT SECTIONS: Abstract, Introduction, and Conclusions

The short sections of a technical paper – the abstract , introduction , and conclusion sections – identify the important results of your work, and persuade a reader that reading the rest of the paper is worth the time. Typically a reader will look first at the abstract, to find out what the paper is about. If the abstract looks promising, the conclusions come next. If the conclusions look interesting, and especially if they're unexpected, the reader will next check the introduction to see if the experimental protocol was legitimate. If the introduction suggests that you knew what you were doing, the reader will usually read the rest of the article for the details that led to your conclusions.

Abstract

An abstract is an extremely terse summary of the entire paper, about three to six sentences long, which in a journal appears in small print just below the article's title and list of authors. You should include the abstract on a cover page just below the title and author list. The purpose of an abstract is simple, it provides readers with a brief glimpse into the subject of the paper, to help them decide whether to take the time to read the whole thing. Since abstracts are often published separately and distributed more widely than the articles themselves, they are very useful when one is doing a research project. One of the first steps in doing research is to search recent publications for papers that might be helpful, and good abstracts make it possible to determine quickly which papers are relevant.

The structure of the abstract is essentially a miniature version of the structure of the paper. The difference is that each of the five major sections (introduction, theory, procedure, analysis, and conclusion) might be represented in the abstract by only a sentence or even a phrase. Often the theory section is omitted completely for the abstract, unless of course, the paper is a theoretical one. In all cases, the abstract should summarize the introduction and conclusion sections of the article, including a short quantitative summary of your results and their implications. Although