Objectives

* Continuing Graphic Design
* Introduction to CS Research
  > Presenting research
  > Reviewing research papers

Contrast in Publication Styles

**Title**

Heading
This is body text. It's smaller than the heading, lighter in weight, and longer in line length. We've also changed its shape to a serif font, because serifs make small text easier to read. Redundant encoding produces an effective contrast that makes it easy to scan the headings and distinguish headings from body text.¹

¹ This is a footnote: It's even smaller, and positioned at the bottom of the page.

Simplicity vs Contrast

* Tukey: unnecessary lines (?)
* Tufte: try squint test

Too Little Contrast

* Should distinguish captions from text fields
  > Most of the visual variables are the same

White Space

* Challenge: balance need for white space against packing information & controls into display
  > Use white space for grouping, instead of lines
  > Use margins to draw eye around design
  > Integrate figure and ground
    > Object should be scaled proportionally to its background
  > Don’t crowd controls together
    > Crowding creates spatial tension and inhibits scanning

Fig. 1. This is a caption, which is smaller than body text, and set off by position, centering, and line length.

Web: Typically sans-serif
Idea: Get rid of the grid rules on a standard bar chart
Use white space to show where the grid lines would cross the bars

PRESENTING RESEARCH IN COMPUTER SCIENCE

Presenting Research
- Goals: tell your great solutions to important problems
  - Back that up with evidence that your solution is great
- Written forms
  - Papers to conferences, journals
  - Posters
- Oral forms
  - Presentations

General Presentation Outline
- Intro/Motivation
  - Problem is big, important, difficult
- Background
  - Terminology, technology, domain
- Ideas
  - Described clearly, with examples
  - Provide intuition
- Evaluate ideas
  - Proof
  - Experiments — methodology, repeatable
    - Analyze data, draw conclusions
- Related Work
  - Other people working on similar problems
- Conclusions, Future Work
  - This is what we learned
  - It’s not the end...
Reviewing Process

• Typically anonymous reviews
  ➢ "blind" – authors don’t know reviewers
  ➢ "double-blind" – reviewers don’t know the authors
• Several reviewers review each paper
  ➢ Each gives opinion on whether a paper should be accepted or rejected from a conference/journal
• Come to consensus on if paper should be accepted/rejected

The Task of the Reviewer

• Vet the paper
  ➢ Good idea
    • Possible considerations: scope of problem; usefulness, applicability of solution
  ➢ Demonstration/proof of idea
  ➢ Prototype, proofs
  ➢ Good methodology
  ➢ Bias in experiments?
  ➢ Good evaluation
  ➢ Right metrics?
  ➢ Know related work, context of work

The Task of the Reviewer

• Give feedback to authors
  ➢ What was good, what could be improved
    • Either for accepted version of paper or before submitting to another conference
  ➢ Suggestions for how to improve presentation
    • clarify, other/better experiments/metrics
  ➢ Related work
    • "This work sounds similar to XXX…"

Review Criteria

• Varies by conference, journal, area, level, ...
• Generally
  ➢ Relevance and importance of problem
  ➢ Correctness and contribution of the results reported
  ➢ Clarity of the presentation

What to Look For in Your Review

• Overall problem
• Goals of researcher
• Contributions
  ➢ Keywords: new, novel
• Technical approach
  ➢ Key insights ("leverage", "utilize")
• Evaluation
  ➢ Answers all your questions about approach?
• Limitations
  ➢ May not be a general-purpose solution
  ➢ Check assumptions
  ➢ Clarity of presentation

Our Task

• Read 2-page poster abstracts
  ➢ Describe a research problem that will be presented on a poster
• Select which posters will be presented
• Special considerations
  ➢ Condensed version but still understandable
  ➢ Work is not too preliminary
  ➢ Will it generate conversation
  ➢ Read and fill out review form for first one for Monday