

Presentations: Written and Spoken

or

People will pay more attention to
you if you communicate well!

Sources and Ethics

- Somebody has almost certainly thought about what you are doing, and parts of it have almost certainly been solved.
- For specific items, you must give an original source and cite it properly.
- Refereed publications vs. flashy Internet postings.

- Plagiarism:  Consider it ILLEGAL.
If there is *any question* about whether a phrase (or even a particular word) should be cited, protect yourself!

... and the associated noise is “systematically coupled to the underlying process” [13]. ...

Linearity

- Start at the beginning and go to the end!
- Flowchart or detailed outline may help
- Omit needless words*.

* *Strunk, Jr., W. and E.B. White, 1972. The elements of style. Allyn and Bacon: Boston.*

Introduction:

- Bring reader from general to specific
- State hypothesis or objective
- Indicate why work is important
- Review prior work that applies
- etc

Approach:

- How the experiment or test was designed
- Details of the apparatus or system
- Accuracy and precision issues
- etc

Results:

- Major Result A, with figures and description
- Major Result B
- etc

Discussion:

- Do results support hypothesis?
- Impact of findings
- Future work
- etc

A Few Pointers on Speaking

The audience is here to see YOU, not just your materials.
Smile and engage them!

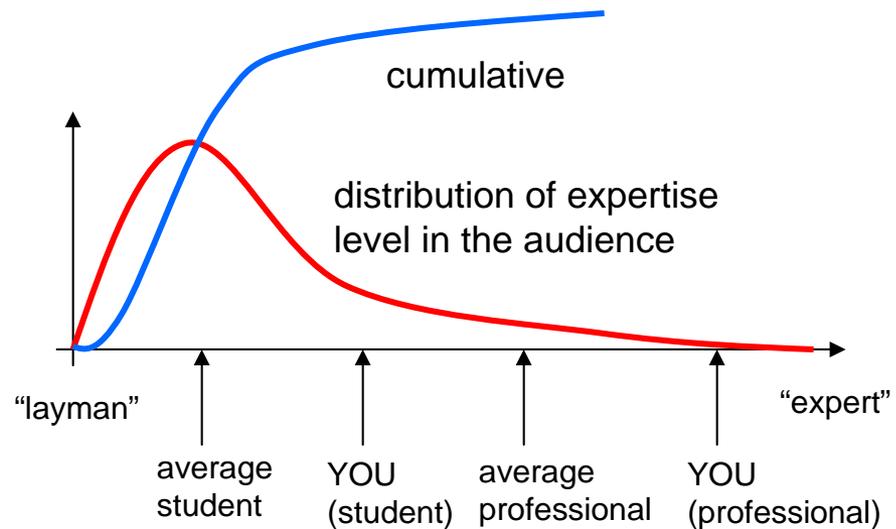
Write out your talk so it is clean from start to end.

Don't lose anyone!

Practice your talk so you are confident up there.

Get feedback on your talk, because it will help.

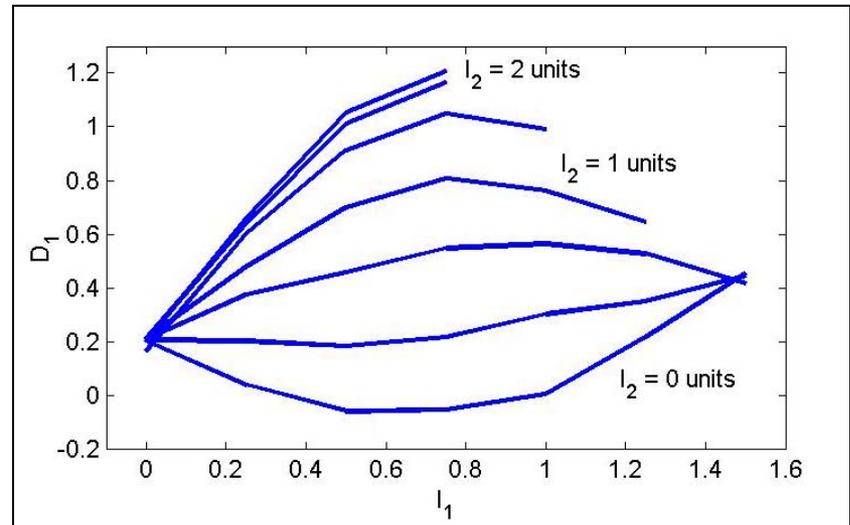
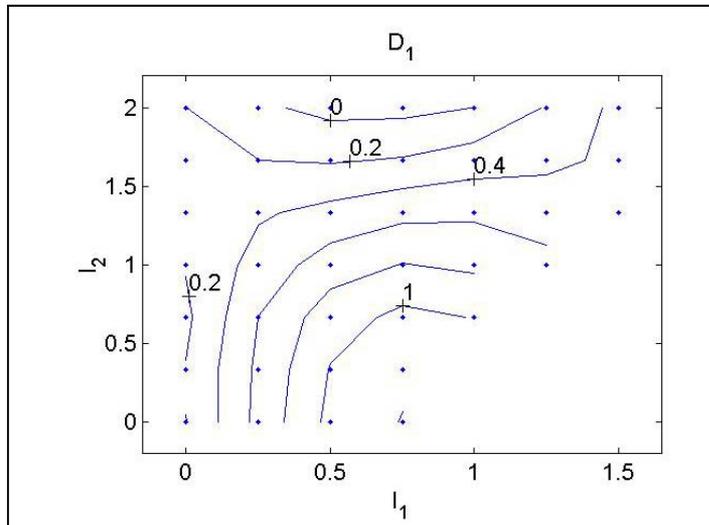
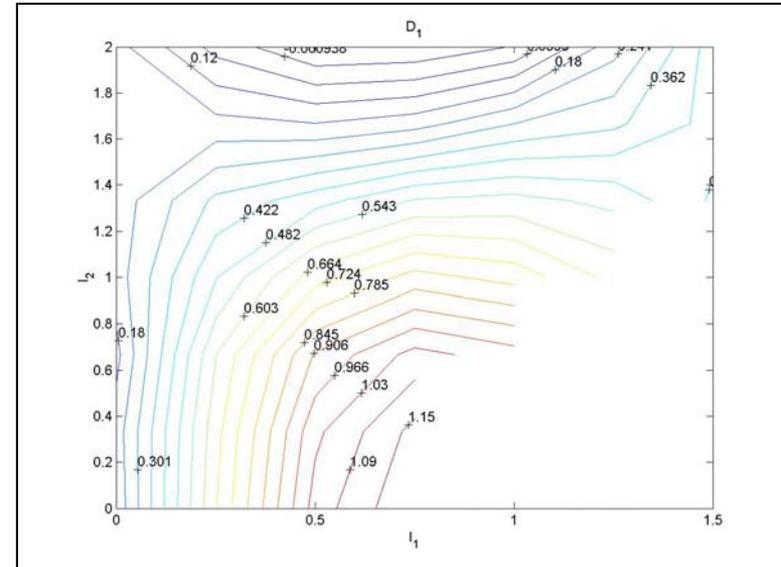
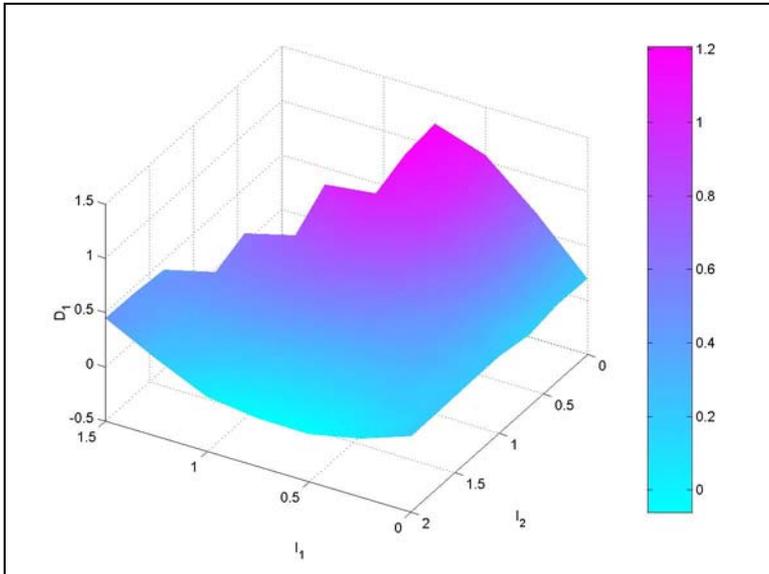
Prepare for questions.

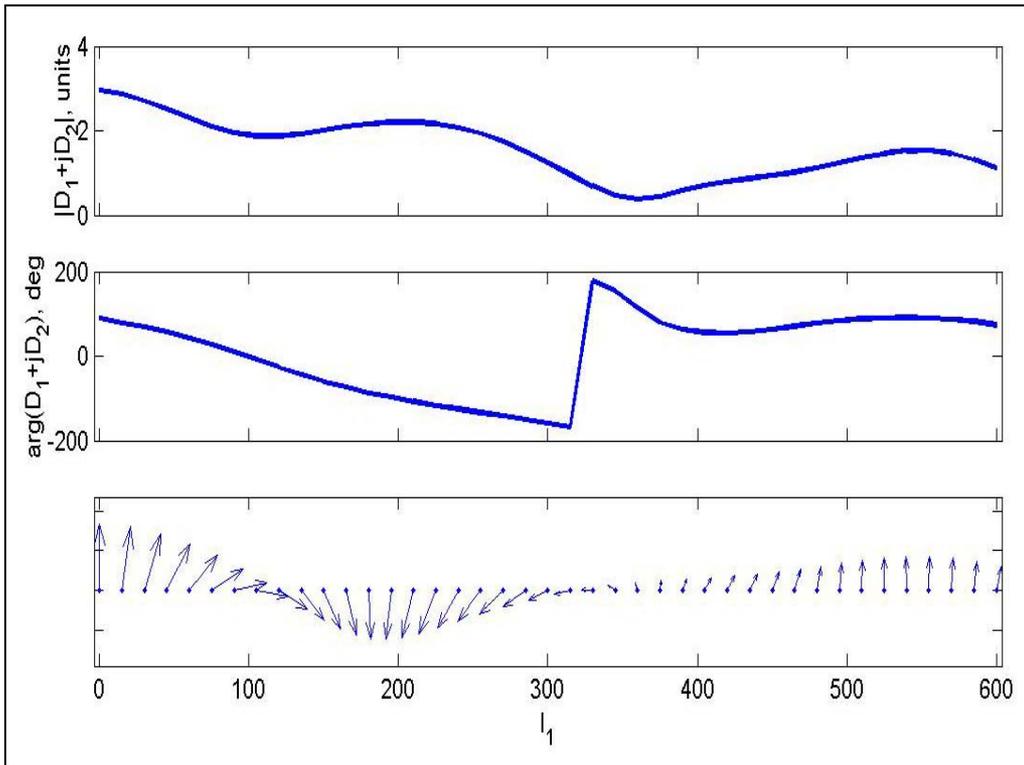


*90% of the talk accessible to
90% of the audience*

A GOOD FIGURE > 1000 WORDS

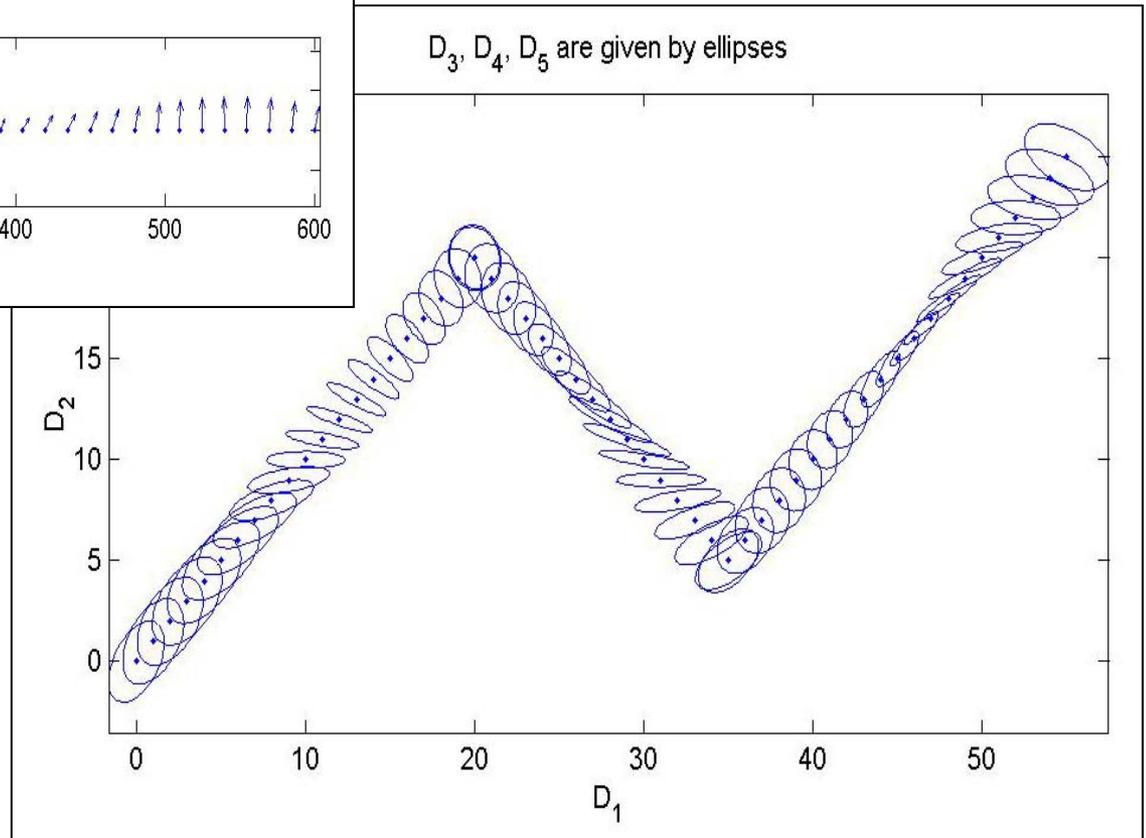
A bad figure is worth a few bad words





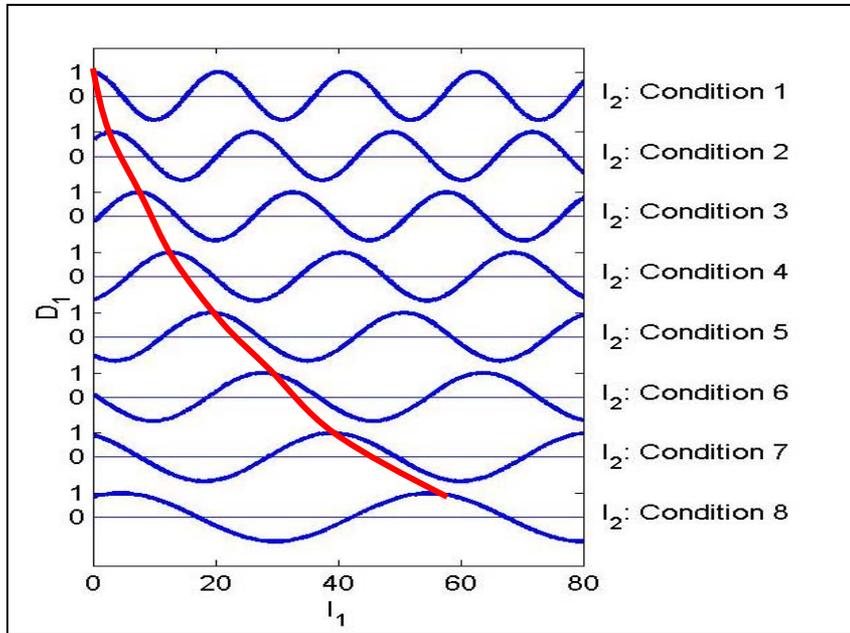
Wind speed and direction as a function of time. Top two plots are combined into the bottom plot: one independent variable, two dependent variables.

D_3, D_4, D_5 are given by ellipses



Vehicle trajectory: one hidden independent variable; five dependent variables

Figure from *Principles of Naval Architecture*, E. Lewis, ed., SNAME: New York, 1988. Original reference: Vossers, G., and W.A. Swaan 1960. Some seakeeping tests with a Victory model. *Int. Shipbuilding Progress*.



Shows two independent and one dependent variable. Style shows the effects of varying phase and period.

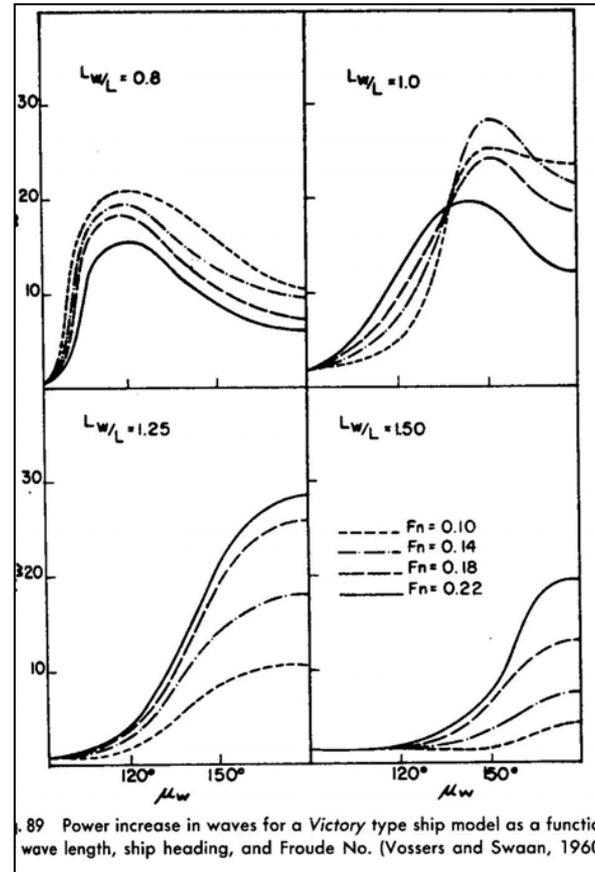


Fig. 89 Power increase in waves for a Victory type ship model as a function of wave length, ship heading, and Froude No. (Vossers and Swaan, 1960)

Caption injured, and y-axis label missing; gives three independent variables (length ratio, Froude number, and heading to waves) and one dependent variable (added power coefficient).

Originally published in Lewis, Edward V. *Principles of Naval Architecture*. Vol. 3: *Motions in Waves and Controllability*. Jersey City, NJ: SNAME, 1989. Reprinted with the permission of the Society of Naval Architects and Marine Engineers (SNAME).

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2.017J Design of Electromechanical Robotic Systems
Fall 2009

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