

PAESMEM/Stanford School of Engineering  
Workshop on Mentoring  
Stanford University  
21 June 2004

---

## Feedback for Mentors

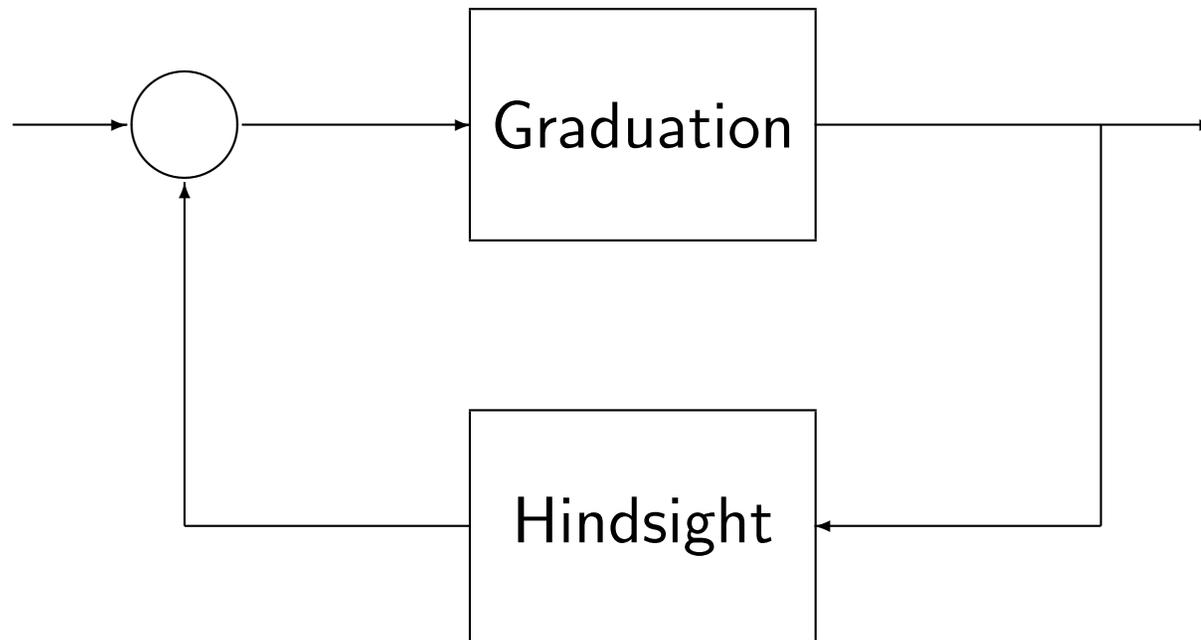
Robert M. Gray

Lucent Technologies Professor of Engineering  
Vice Chair, Department of Electrical Engineering

This work was partially supported by the National Science Foundation.  
This talk is essentially the same as one given to the PAESMEM Forum in  
Washington DC on 17 March 2003.

# Introduction

**Feedback** a basic principle of engineering.



Useful model for mentors:

- measuring success as a mentor: Track careers of former students.
- gathering and promulgating successful techniques: Stay accessible to and keep in touch with former students, benefit from their hindsight

Some collective wisdom from my former students:

**Followup** Mentoring does not stop with a degree, students evolve into colleagues.

Visits from alums provide wonderful examples, source of information, and inspiration.

Former students often lack mentors at new institutions.

**Credibility** The better we are at what we do, the better mentors we will be.

**Integrity** Words won't do it (just read the newspapers). Many students do not take it seriously. Mentors must.

**Confidence** Many students start with little, but can become outstanding when properly encouraged and appreciated.

**Cooperation** Discourage aggressive competition among students, encourage cooperative efforts and openness.

**Chores and citizenship** Engage students in professional responsibilities: reviewing, proposal writing, presentations, mentoring.

**Communication skills** Brilliant research is of little use if not understood. Correct English with good style is critically important. Practice writing and speaking skills constantly.

**Professional Activity** Send students to conferences to attend and give talks. Rehearse them extensively. Introduce them to colleagues. Get them plugged in.  
After graduation recommend them for program committees, technical committees, reviewing chores.

**Credit** Give it generously to students. It helps them and makes you look good.

**Sharks** Although many institutions have programs for diminishing sexual harrassment, it still exists. Be sensitive to potentially embarrassing or dangerous situations and do not accept inappropriate behavior from colleagues towards your students.

These points may seem obvious, but they are not generally recognized.

Parting words: How can agencies foster good mentoring?

Promote events that spread the word and stimulate discussion (like this one).