PHYSICS AND ASTRONOMY
COLLOQUIUM

Dr. Scott Oser

University of British Columbia

"Blind Analyses, or The Answer's Not in the Back of the Book!"

Abstract

When I was an undergraduate, I was once startled to hear our instructor announce that the answer given in the back of our textbook to a problem was wrong. When I protested that I had got exactly the same result as the textbook, the instructor wryly remarked "It's amazing how easy it is to get the answer you expect to get, even when it's the wrong answer." This effect, which goes by the general name of "bias", is surprisingly common in physics and astronomy. I will review several examples of bias affecting the result of an experiment, including cases where bias resulted in entirely incorrect results.
I will then discuss the motivations and methodologies for "blind analysis".
Blind analysis is a technique in which the result of a measurement is hidden from everyone, even the analyst, until publication. I will show how blind analysis can reduce if not eliminate bias, and argue forcefully that blind analysis techniques should become standard practice in the physical sciences just as they are in for example medical drug trials.

Wednesday, March 14, 2012
3:30 p.m.
Bob Wright Centre
Room A104