

Introductory Courses

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Faculty

LEON J. GLESER
PROFESSOR

2732 Cathedral of Learning
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Education:

- PhD (Statistics) from Stanford University (1963)
- MS (Statistics) from Stanford University (1962)
- BS (Mathematics) from the University of Chicago (1960)

Research Interests:

- Measurement and reporting of uncertainty
- Linear and nonlinear measurement error regression models
- Theories of statistical inference
- Statistical meta-analysis
- Data mining and statistical learning theory
- Applications of statistical models and methods to the biological, physical, and behavioral sciences

Quote:

“Classical statistical papers and books, with some notable exceptions, have tended to treat statistical inference as being based on a single experiment, and concentrated on the design and inferential analysis of that one experiment. Science, however, is a process of learning and exploration, with each experiment motivating and guiding the next one. Modern statistics has started to give greater consideration to designing this process of learning: for example, data mining and statistical learning theory, statistical meta-analysis and adaptive clinical



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trials. In the learning process, communication from one investigator to another of well-understood and meaningful measures of uncertainty is essential."

Courses:

- Spring 2007 (2074): STAT 1632, Intermediate Mathematical Statistics
- Fall 2006 (2071): STAT 1631, Intermediate Probability
- Fall 2006 (2071): STAT 2631, Theory of Statistics 1
- Spring 2006 (2064): STAT 2270, Data Mining

Selected Publications:

- Probability Models and Applications (with C. Derman and I. Olkin). Macmillan, New York, 1980. Second Edition, 1994.
- Estimation in a multivariate "errors in variables" regression model: Large sample results. *Annals of Statistics*, 9 (1981), 24-44.
- The effect of positive dependence on chi-squared tests for categorical data (with D. S. Moore). *Journal of the Royal Statistics Society, Series B* 47 (1985), 459-465.
- The nonexistence of $100(1-\alpha)\%$ confidence sets of finite expected diameter in errors-in-variables and related models (with J.T. Hwang). *Annals of Statistics*, 15 (1987), 1351-1362.
- Improvements of the naive approach to estimation in nonlinear errors-in-variables regression models. *Contemporary Mathematics*, 112 (1990), 99-114.
- Stochastically dependent effect sizes (with I. Olkin). Chapter 22 in Handbook of Research Synthesis (H. Cooper and L. Hedges, Eds.). Russell Sage Foundation, New York, 1994.
- Models for estimating the number of unpublished studies (with I. Olkin). *Statistics in Medicine*, 15 (1996), 2493-2507.
- The importance of assessing measurement reliability in multivariate regression. *Journal of the American Statistics Association*, 87 (1992), 696-707.
- Assessing uncertainty in measurement. *Statistical Science*, 13 (1998), 277-290.