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SOCRE: Statistics Online Computational Resource for Education

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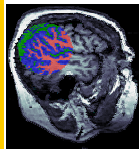
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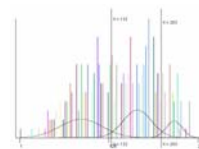
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SOCRE: Statistics Online Computational Resource for Education



Ivo D. Dinov, Annie Che & Jennie Cui

<http://www.socr.ucla.edu/>



What is SOCR and what are the Resource's goals?

SOCRE Goals – To develop tools for

- Interactive Virtual Experimentation and Probability Modeling
- Hands-on Distribution Modeling
- Model Fitting and Statistical Analysis
- Data Interrogation and Visualization
- Statistics Online Tutorial
- Additional Remote Statistics Education and Computational Tools

Recent SOCRE Developments

- SOCRE-R Interface for importing **R-functionality** within SOCRE
- SOCRE Charts – a SOCRE package for online **data visualization**
- Instructor Tools – **Student Activities**, Labs, Projects & Documentation
- SOCRE **Class-notes** – integrated topic-specific learning materials
- SOCRE Utilization & **Assessment** of Efficacy in undergrad classes
- Extended SOCRE **Analyses** plug-in framework

SOCRE as an Internet-based Interactive Learning Environment

SOCRE Basics

- The SOCRE resources include virtual probability experiments, games, tools for data modeling and statistical analysis - e.g., Monte Hall Game, Confidence Intervals Experiment, Mixture Distribution Modeling, Regression, Non parametric tests, Model Fitting
- SOCRE is a Java-based, Plug-in Architecture Suite of Applets
- **Funding/Acknowledgements**
SOCRE is funded by NSF DUE 0442992, NIH/NCBC Grant U54 RR021813
- **Reports on SOCR**
Leslie, M., Statistics Starter Kit. *Science*, 2003. 302(5): p. 1635.
Dinov, I., SOCR: Statistics Online Computational Resource. submitted, 2005.

Online Statistics Education Initiatives & SOCRE

- National and international initiatives for overhauling science undergraduate education attracting significant interest from researchers, educators, policy makers and funding agencies.
- Multimedia Educational Resource for Learning and Online Teaching (**MERLOT**)
- DOE Gateway to Educational Materials (**GEM**)
- Eisenhower National Clearinghouse for Mathematics and Science Education (**ENC**)
- Fund for the Improvement of Postsecondary Education (**FIPSE**)
- Regional Technology in Education Consortium (**R*TEC**)
- The **SOCRE** resources are part of most of those initiatives.

Functionality and Screenshots