

From Expert Witness Testimony to Evaluating Evidence, Statisticians Apply Statistical Methodologies to Justice and the Law

Participants at the Joint Statistical Meetings in DC include statisticians from the Bureau of Justice Statistics and the DC Public Defender's Service

ALEXANDRIA, VA (Media-NewsWire) JULY 24, 2009 --- As court cases become more and more complex, statisticians are playing a larger role in justice and the law. At the Joint Statistical Meetings (JSM) in Washington DC, statisticians will discuss the role of statistics in a variety of legal situations, from evaluating evidence, to determining trends in post-trial activity, to expert witness testimony. JSM, the largest annual gathering of statisticians in North America, will be at the Washington (DC) Convention Center August 1—6.

“Statisticians perform a range of services in the fields of law and justice,” said Sally Morton, ASA president. “They analyze data that can help judges or juries decide guilt or innocence, providing analyses that enable courts to draw sound conclusions. At JSM, they will share their findings with colleagues and other interested individuals.”

Participants in JSM roundtables and other sessions include statisticians from the Bureau of Justice Statistics, the DC Public Defender's Service, George Washington University, Harvard Law School, as well as other institutions. Sessions are organized in two-hour timeframes, with several presentations of about 15 minutes, followed by Q&A. Statistical posters stand alone; they visually tell a story from the data about some phenomena revealing the conclusions that can be drawn.

[Note: Members of the press can register to attend any of the conference sessions online at <http://www.amstat.org/meetings/jsm/2009/index.cfm?fuseaction=pressregistration>]

Some of the JSM sessions focusing on law and justice are described below; additional sessions on this and many other subjects can be found via the JSM online program, where you can search on keywords, date, type of program, presenter's name or affiliation. Link to the program: <http://www.amstat.org/meetings/jsm/2009/onlineprogram/index.cfm?fuseaction=main>.

Statistics and the Law

Advance in the Use of Statistical Methodology in the Legal Setting

Sunday, August 2, 4—5:50 pm, Room CC-149A

Presenters: *Thomas H. Cohen and Michael D. Sinclair, Bureau of Justice Statistics (presentation begins at 4:25 pm)*

In the civil justice system, there is often an expectation of case resolution with jury and bench trials. Results of this research show that the legal issues adjudicated at trial, the type of trial, damage award amounts, punitive damages, filing to disposition time, trial length, and geographic location are all significantly associated with the decision of one or both litigants to seek post-trial relief.

http://www.amstat.org/meetings/jsm/2009/onlineprogram/index.cfm?fuseaction=abstract_details&abstractid=305277

The Potential for Formal Statistical Analysis to Assist Courts with Relatively Small Data Set

Monday, August 3, 8:30—10:20 am, CC-L Street Bridge

Presenters: *Joseph L. Gastwirth and Qing Pan, George Washington University (poster presentation)*

Four plaintiffs brought an age discrimination complaint after being discharged. The court's decision noted some simple statistical measures with information on 44 employees, but does not apply formal statistical methods. We utilize formal statistical tests to re-examine the data to detect the decreasing trend in the average age of new hires, and proportional hazards model to test whether there was a relationship between the age of an employee and his probability of being RIFed. Since the plaintiffs alleged that a new supervisor was responsible, the three time periods (before the new supervisor, when he was co-supervising and when he was sole supervisor) are considered important in our analysis. Finally, results from the hiring and firing data are combined and statistically sound conclusions are drawn.

http://www.amstat.org/meetings/jsm/2009/onlineprogram/index.cfm?fuseaction=abstract_details&abstractid=304971

So you want to be an expert witness?

Monday, August 3, 2—3:50 pm, Room CC-143B

Panelists: *Christopher H. Schmid, Tufts Medical Center; Elaine Allen, Babson College; Harold Feldman, University of Pennsylvania, and Jeffrey Ginsberg, Kenyon and Kenyon (begins at*
Expert witnesses testify to inform judges and jury about technical issues arising in legal cases. This testimony can take the form of reports, depositions and court testimony. Typically, the litigants will each hire experts in the hope that those experts will buttress their cases. This introduces an interesting ethical issue for the experts in that they are supposed to provide unbiased assessments to inform the court, but may feel an allegiance also to the side that is compensating them and to which they have often formed an attachment.
http://www.amstat.org/meetings/jsm/2009/onlineprogram/index.cfm?fuseaction=abstract_details&abstractid=304249

Data sharing in forensic science and the impact on the legal system

Tuesday, August 4, 10:30 am—12:20 pm, Room CC-158A

Presenter: *Edward Ungvarsky, Public Defender Service for the District of Columbia (begins at 11:55 am)*

Prosecutors are presenting increasing amounts and types of scientific evidence in the courtroom, leading to changes in criminal defense practice. Learning to evaluate and challenge such evidence is critical. Identifying experts who can talk knowledgeably about the research and the literature is important.

http://www.amstat.org/meetings/jsm/2009/onlineprogram/index.cfm?fuseaction=abstract_details&abstractid=303177

The Prosecutor's Fallacy

Tuesday, August 4, 10:30 am—12:20 pm, Room CC-202A

Presenter: *Mark Buchanan, Independent Science Writer (begins at 11:35 am)*

Buchanan, the ASA 2008 Excellence in Statistical Reporting Award, will speak on his winning article, "The Prosecutor's Fallacy," about a court case in the Netherlands. The article can be found at this link:

<http://buchanan.blogs.nytimes.com/2007/05/16/the-prosecutors-fallacy/?scp=1&sq=The%20Prosecutor's%20Fallacy&st=cse>

Complete information about this sessions is available at:

http://www.amstat.org/meetings/jsm/2009/onlineprogram/index.cfm?fuseaction=abstract_details&abstractid=303057

About JSM

JSM is held jointly with the American Statistical Association (ASA), the International Biometric Society (ENAR and WNAR), the Institute of Mathematical Statistics (IMS), and the Statistical Society of Canada. More than 5,000 statisticians from government, industry and academia are expected to attend the 2009 JSM, which features a range of activities, including more than 2,500 presentations, panels, roundtables, poster presentations, and continuing education courses. There also is an exhibit hall (with state-of-the-art statistical products and opportunities); a career placement service; and social and networking opportunities. Complete program and registration information for the 2009 JSM is available at the JSM web site at <http://www.amstat.org/meetings/jsm/2009/>.

About the American Statistical Association

The American Statistical Association (ASA), a scientific and educational society founded in Boston in 1839, is the second oldest continuously operating professional society in the United States. For 170 years, ASA has been providing its 18,000 members serving in academia, government, and industry and the public with up-to-date, useful information about statistics. The ASA has a proud tradition of service to statisticians, quantitative scientists, and users of statistics across a wealth of academic areas and applications. For additional information about the American Statistical Association, please visit the association's web site at <http://www.amstat.org> or call 703.684.1221.

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