Twin-Cities Chapter of the American Statistical Association
May 8, 2011 Augsburg College

Topic: **Recent US Supreme Court Finding on Statistical Significance**

On March 22, 2011 the US Supreme Court found that Matrixx [a US public company] could not use the lack of statistical significance to justify withholding adverse information from investors. "Matrixx’s premise that statistical significance is the only reliable indication of causation is flawed." "Something more than the mere existence of adverse event reports is needed to satisfy that standard [material to a reasonable investor], but that something more is not limited to statistical significance." "Matrixx’s proposed “bright-line” rule – requiring an allegation of statistical significance to establish a strong inference of scienter – is once again flawed."

This session examines the implications of the courts' finding for statistics in general and for statistical education in particular.

Session organizer: **Milo Schield (Augsburg College)**

**Supreme Court Finds Statistical Significance Not Necessary for Causation. Introduction and Overview:**

**Speaker:** **Daniel Kaplan (Macalester College)**

**The Supreme Court Matrixx Decision: Is Significance Significant?**

Abstract: “Supreme Court decisions famously reflect political divides, but they also are a product of the multiple simultaneous objectives of the legal system: creating incentives for honest behavior, distributing risk and cost among competing parties, and maintaining predictability, among others. Statistical theory was created for a completely different set of objectives, of which a major one is supporting an idealized scientific process of non-partisan, disinterested investigation. The Matrixx case inhabits a domain where both sets of objectives apply: the desire for informed scientific judgment and the exigencies and conflicts of civic life. Whenever multiple objectives are involved, it's likely that not all of the objectives will be fully realized. Or, to quote Dickens's Mr. Bumble, "The law is an ass." The question is whether statistics is likely to be any less so when dealing with complex matters of allocation and decision-making. I'll discuss in particular the extent to which the canonical set of topics covered in university-level statistics education is oriented toward supporting quantitatively sophisticated, effective decision making in the civic domain.”