



Distinguished Lecturer **BEN SHNEIDERMAN** University of Maryland, College Park

TUESDAY, MARCH 7, 2017 • 10:30 AM
Hackerman Hall B-17

“INTERACTIVE VISUAL DISCOVERY IN EVENT ANALYTICS: ELECTRONIC HEALTH RECORDS AND OTHER APPLICATIONS”

ABSTRACT: Event Analytics is rapidly emerging as a new topic to extract insights from the growing set of temporal event sequences that come from medical histories, e-commerce patterns, social media log analysis, cybersecurity threats, sensor nets, online education, sports, etc. This talk reviews our decade of research on visualizing and exploring temporal event sequences to view compact summaries of thousands of patient histories represented as time-stamped events, such as strokes, vaccinations, or admission to an emergency room. Our current work on EventFlow supports point events, such as heart attacks or vaccinations and interval events such as medication episodes or long hospitalizations. Demonstrations cover visual interfaces to support hospital quality control analysts who ensure that required procedures were carried out and clinical researchers who study treatment patterns that lead to successful outcomes. I show how domain-specific knowledge and problem-specific insights can lead to sharpening the analytic focus so as to enable more successful pattern and anomaly detection.

BIO: Ben Shneiderman is a Distinguished University Professor in the Department of Computer Science, Founding Director (1983-2000) of the Human-Computer Interaction Laboratory, and a Member of the UM Institute for Advanced Computer Studies (UMIACS) at the University of Maryland. He is a Fellow of the AAAS, ACM, IEEE, and NAI, and a Member of the National Academy of Engineering, in recognition of his pioneering contributions to human-computer interaction and information visualization. His contributions include the direct manipulation concept, clickable highlighted web-links, touchscreen keyboards, dynamic query sliders for Spotfire, development of treemaps, novel network visualizations for NodeXL, and temporal event sequence analysis for electronic health records.

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