COMPUTER SCIENCE SEMINAR

Integrating Formalism and Pragmatism to Build Real Data Privacy Solutions

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Abstract: Organizations collect personal information while providing an ever-expanding set of services. The collected data can support various secondary uses and to protect privacy, various law requires information be rendered de-identified before it is repurposed. However, a growing body of evidence suggests data can be re-identified and the viability of such laws have been questioned. I will review how and why re-identification occurs, but also push the discussion from a deterministic view (i.e., re-identification can or cannot occur) toward a probabilistic view (i.e., the likelihood of re-identification). In doing so, I will illustrate how to construct efficient de-identification algorithms that mitigate risks without precluding the secondary endeavors. This work will draw upon experience and case studies from with multiple medical centers around the United States. Brad Malin is an Assistant Professor of Biomedical Informatics and Computer Science at Vanderbilt University, where he directs the Health Information Privacy Laboratory (HIPLab). The HIPLab is funded through grants from the NSF and NIH and its research artifacts have received awards of distinction from the American and International Medical Informatics Associations. In 2010, Dr. Malin received the Presidential Early Career Award for Scientists and Engineers (PECASE), the highest honor bestowed by the U.S. government on outstanding scientists and engineers beginning their independent careers. He completed his education at Carnegie Mellon University, where he received a bachelors in biological sciences, a masters in data mining and knowledge discovery, a masters in public policy and management, and a doctorate in computer science.

> Friday, January 21, 2011, 3:00 pm Mathematics and Science Center: W301

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