



# Statistical and Learning-Theoretic Challenges in Data Privacy

February 22-26, 2010

**ORGANIZING COMMITTEE:** Cynthia Dwork (Microsoft Research), Stephen Fienberg (Carnegie-Mellon), Aleksandra Slavkovic (Penn State) Adam Smith (Penn State)

## Scientific Overview

Privacy is a fundamental problem in modern data analysis. Collections of personal and sensitive data by health networks, government agencies, search engines, social networking websites, and other organizations have become ubiquitous. The potential social benefits of analyzing these databases are significant (for example, better informed policy decisions, more efficient markets, more accurate public health data), while at the same time releasing information from repositories of sensitive data can cause devastating damage. The challenge is to enable analysis of these databases, without compromising the privacy of the individuals whose data they contain. This problem is studied in several scientific communities and under several names, e.g. “statistical disclosure limitation” “privacy-preserving data mining”, and “private data analysis”. The goal of workshop is to establish a coherent theoretical foundation for research on data privacy, and to shed light on the interplay between privacy and concepts from statistics and machine learning, such as consistency and efficiency of estimators, generalization error, robustness and stability of estimation algorithms, and the generation of synthetic data.

## Confirmed Speakers

**John Abowd** (Cornell), **Khamalika Chaudhuri** (UCSD), **Cynthia Dwork** (Microsoft Research), **Stephen Fienberg** (CMU), **Jiashun Jin** (Carnegie Mellon), **Daniel Kifer** (Penn State), **Ravi Kumar** (Yahoo Research), **Bradley Malin** (Vanderbilt), **Frank McSherry** (Microsoft), **Yuval Nardi** (Carnegie Mellon), **Kobbi Nissim** (Ben Gurion Univ), **Sofya Raskhodnikova** (Penn State), **Jerry Reiter** (Duke), **Natalie Shlomo** (Univ. South Hampton), **Vitaly Shmatikov** (Univ. Texas, Austin), **Chris Skinner** (Univ. South Hampton), **Aleksandra Slavkovic** (Penn State), **Adam Smith** (Penn State), **Kunal Talwar** (Microsoft), **Salil Vadhan** (Harvard), **Martin Wainwright** (UC Berkeley), **Larry Wasserman** (Carnegie Mellon)

## Participation

Additional information about this workshop, including links to register and to apply for funding, can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission, and we welcome their applications.

[www.ipam.ucla.edu/programs/data2010](http://www.ipam.ucla.edu/programs/data2010)



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IPAM is an NSF funded institute

