

## **TITLE**

# **Privacy in Information Systems**

## **DESCRIPTION**

The right to privacy was recognized as early as 1948 by the United Nations in the Universal Declaration of Human Rights. With the exponentially accelerated growth of information technologies and the shift of the Internet connectivity paradigm towards almost every object of everyday life, privacy will undeniably become as crucial as ever. In this spirit, we would like to investigate mechanisms that perturb information of individuals, in an optimal fashion that strives to maximize privacy, while preserving the utility of the data to a predetermined degree. To this end, we wish to draw upon the powerful mathematical framework provided by information theory, data compression and convex optimization. Applications include a wide range of exciting scenarios such as Internet querying, retrieval of location-based information, P2P networks, and controlled disclosure of statistical databases.

## **CANDIDATE PROFILE**

We seek a prospective PhD candidate with at least an upper BS degree (or equivalent), ideally in Electrical Engineering, Computer Science or Mathematics, with an outstanding academic record, perfectly comfortable with mathematics and statistics, and with an excellent command of English. No specific prior knowledge is absolutely required, but we assume the candidate's willingness to acquire a solid theoretical background on subjects such as information theory, lossy compression and convex optimization.

## **MORE INFORMATION**

Enquiries can be made to Prof. Forné or Dr. Rebollo-Monedero (`{jordi.forne,david.rebollo}@entel.upc.edu`). Please include a CV and copies of academic qualifications and transcripts.

For additional information, please visit  
<http://sites.google.com/site/davidrebollomonedero/collaboration>.