



Título: Achieving Privacy In Data Streams

Data: 11/10/2019

Horário: 10:00h

Local: Sala de Seminários - Bloco 952

Resumo:

Numerous realworld applications continuously publish data streams to benefit people in their daily activities. However, these applications may collect and release sensitive information about individuals and lead to serious risks of privacy breach. Differential Privacy (DP) has emerged as a mathematical model to release sensitive information of users while hindering the process of distinguishing individuals' records on databases. Although DP has been widely used for protecting the privacy of individual users' data, it was not designed, in essence, to provide its guarantees for data streams, since these data are potentially unbounded sequences and continuously generated at rapid rates. Consequently, the noise required to mask the effect of sequences of objects in data streams tend to be higher. In this paper, we design a new technique, named **????-DOCA**, to publish data streams under differential privacy. Our approach provides a strategy to determine the sensitivity value of DP and reduces the necessary noise. Our experiments show that the application of **????-DOCA** to anonymize data streams not only reduced significantly the necessary noise to apply differential privacy, but also allowed for the output data to preserve the original data distribution.

Banca:

- Prof. Dr. Javam De Castro Machado (MDCC/UFC - Orientador)
- Prof. Dr. João Paulo Pordeus Gomes(MDCC/UFC)
- Prof. Dr. Juvêncio Santos Nobre (UFC)