## MSc thesis defense presentation

## Αγαμ μνων Γιαννακ πουλος

## defends his MSc thesis

**Date:** Τρ**■**τη, 28 Φεβ 2017

**■**ρα: 16:00

Σχολ■ Ηλεκτρολ■γων

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Location: Υπολογιστ ν, ΕΜΠ

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1.1.31

**Learning Poisson** 

Thesis title: Binomial Distributions

with Differential Privacy

• <u>Δημ</u>τρης

Φωτ■κης

Committee: • Αριστε■δης

Παγουρτζ

• <u>Ευστ</u>θιος Ζ<u>χος</u>

## **Thesis abstract**

This thesis tries to leverage two major research areas. The first area concerns the Distribution Learning Theory and the second the Differential Privacy. More specific, given a highly efficient algorithm which learns with ε-accuracy a Poisson Binomial Distribution we try to study its Differential Privacy property. We show that the Algorithm achieves Differential Privacy under specific circumstances (regarding PBD nature). If the PBD close to a (n,k)-Binomial form the algorithm is Differential Privacy. If the PBD is close to a k-sparse form algorithm's privacy depends on PBD cardinality.

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