



## Seminar/Talk

# Information, Computation, & Quantization: Infinitely divisible privacy and beyond

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Host: Marco Mondelli

In this talk, I introduce a hypothesis-testing-based formulation of differential privacy in classical computation. The Gaussian Differential Privacy framework of Dong--Roth--Su (2022) established a central limit theorem for the composition of multiple private mechanisms. Building on this work, I present a Poisson extension of their result and show that both the Gaussian and Poisson limits are unified under a broader framework of infinitely divisible privacy. This perspective reveals structural connections between differential privacy, probability theory, statistics, and discrete mathematics. I conclude by discussing computational differential privacy and its connections to cryptographic constructions such as pseudorandom generators, as well as a step toward quantizing privacy in quantum computation, outlining a framework for both computational and quantum differential privacy.

**Monday, March 23, 2026 11:00am - 12:00pm**

Office Bldg West / Ground floor / Heinzl Seminar Room (I21.EG.101)



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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