

Almost There: Capacity of Private Information Retrieval from Coded and Colluding Servers

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Abstract

Private information retrieval (PIR) addresses the question of how to retrieve data items from a database or cloud without disclosing information about the identity of the data items retrieved. The area has received renewed attention in the context of PIR from coded storage. Here, the files are distributed over the servers according to a storage code instead of mere replication. Alongside with the basic principles of PIR, we will review recent capacity results and demonstrate the usefulness of the so-called star product PIR scheme.

The talk is based on joint work with Ragnar Freij-Hollanti, Oliver Gnille, Lukas Holzbaur, David Karpuk, and Jie Li.

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