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Allison Beemer* (anbeemer@njit.edu), **Sanghamitra Dutta**, **Haewon Jeong**, **Esther Lamken**, **Emina Soljanin** and **Mansi Sood**. *Longevity of User Anonymity*.

In our data-driven world, ensuring user privacy is paramount and takes many forms. One aspect is guaranteeing that the existence of communication links between particular users be kept private. In other words, safeguarding the anonymity of users. The widespread use of communication platforms may be leveraged to ensure that users are “unlinkable” by an adversary: anonymity mixes are message routers that use various techniques to disguise the identities of pairs of communicating parties. A batch mix, for example, receives and holds packets from message sources, forwarding all messages to their respective destinations in a single batch only once some large number of messages have been accumulated. However, protecting anonymity using this strategy comes at the cost of communication delays for users. This talk explores the trade-offs between the amount of time a user is guaranteed anonymity using a mix and the incurred latency. (Received September 11, 2019)