# Abigail Gentle

Sydney, Australia
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## Education

2023 - Present | **Doctor of Philosophy, Computer Science**
*The University of Sydney*, *Supervisors:* Clément Canonne and Sasha Rubin

2018 - 2022 | **Bachelor of Science (Computer Science) (Philosophy)**
*The University of Sydney*

2022 - 2023 | **Bachelor of Science (Computer Science Honours) Honours Class I**
*The University of Sydney*
Thesis: "Differential Privacy in the Group Shuffle Model."

## Publications

1. **A. Gentle**, "Necessity of Block Designs for Optimal Locally Private Distribution Estimation," presented at the IEEE Information Theory Workshop (ITW 2025).
2. A. Aamand, F. Boninsegna, **A. Gentle**, J. Imola, and R. Pagh, "Lightweight Protocols for Distributed Private Quantile Estimation," presented at the Forty-second International Conference on Machine Learning (ICML 2025).
3. C. L. Canonne and **A. Gentle**, "Locally Private Histograms in All Privacy Regimes," in 16th Innovations in Theoretical Computer Science Conference (ITCS 2025).

## Invited Talks

2024 | **Simons Institute for the Theory of Computing**, University of California, Berkeley
*Hidden Gems: Kearns Saul's Inequality*
For the Sublinear Algorithms Summer Research Program

2025 | **Innovations in Theoretical Computer Science**, Columbia University, NYC
*Locally Private Histograms in All Privacy Regimes*

2025 | **IEEE Information Theory Workshop**, Sydney, Australia
*Necessity of Block Designs for Optimal Locally Private Distribution Estimation*

## Institutional Talks and Reading Groups

2024 | **Simons Institute for the Theory of Computing**, University of California, Berkeley
*Differential Privacy Reading Group (Organiser)*
A weekly differential privacy reading group for the Sublinear Algorithms Summer Research Program. Gave the introductory talk on differential privacy, a focused talk on shuffle differential privacy, and arranged speakers.

2024 | **Sydney Algorithms and Computational Theory Group**, University of Sydney
*SACT Seminar*
Presenting "Locally Private Histograms in All Privacy Regimes"

2025 | **Sydney Algorithms and Computational Theory Group**, University of Sydney
*SACT Seminar*
Presenting "Lightweight Protocols for Distributed Private Quantile Estimation"