

Abigail Gentle

Sydney, Australia

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Education

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| 2023 - Present | Doctor of Philosophy, Computer Science
<i>The University of Sydney, Supervisors: Clément Canonne and Sasha Rubin</i> |
| 2018 - 2022 | Bachelor of Science (Computer Sc.) & Adv. Studies (Phil.) (Hon. Class I)
<i>The University of Sydney</i>
Thesis: "Differential Privacy in the Group Shuffle Model." |

Professional Experience

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| 2023 - 2024 | KG2 Agricultural Data Platform
<i>Software Engineer and R&D Lead</i>
Lead a team of 4 data scientists to research and develop new geo-spatial machine learning and classification tools. Additionally performed maintenance and upgrades to Australia's oldest and largest farmer database. |
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Publications

- Abigail Gentle** (2025). Optimal Designs for Distribution Estimation under Local Differential Privacy. (Pending submission).
- Anders Aamand, Fabrizio Boninsegna, **Abigail Gentle**, Jacob Imola, Rasmus Pagh (2025). Lightweight Protocols for Distributed Private Quantile Estimation. **Forty-Second International Conference on Machine Learning** (Spotlight, ICML 2025).
- Clément Canonne, **Abigail Gentle** (2025). Locally Private Histograms in All Privacy Regimes. **16th Innovations in Theoretical Computer Science** (ITCS 2025).

Invited Talks

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| 2024 | Simons Institute for the Theory of Computing , University of California, Berkeley
<i>Hidden Gems: Kearns Saul's Inequality</i>
For the Sublinear Algorithms Summer Research Program |
| 2024 | Theory and Practice of Differential Privacy 2024 , MIT, Boston
<i>Poster Presentation</i>
Locally Private Histograms in All Privacy Regimes |

Institutional Talks and Reading Groups

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| 2024 | Simons Institute for the Theory of Computing , University of California, Berkeley
<i>Differential Privacy Reading Group (Organiser)</i>
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 other speakers. |
| 2024 | Sydney Algorithms and Computational Theory Group , The University of Sydney
<i>SACT Seminar</i>
Locally Private Histograms in All Privacy Regimes |