

# Kabir Tomer

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## EDUCATION

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- **University of Illinois Urbana-Champaign** Champaign, Illinois  
*Ph.D in Computer Science (Supervisor: Dakshita Khurana)* Aug. 2022 – Present
- **Indian Institute of Technology Delhi** Delhi, India  
*B.Tech & M.Tech in Computer Science and Engg. (Dual Degree); GPA: (9.8/10)* Jul. 2017 – Jul. 2022

## PUBLICATIONS & PREPRINTS

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1. **Founding Quantum Cryptography on Quantum Advantage, or, Towards Cryptography from #P-hardness** [[ePrint](#)]  
Dakshita Khurana, Kabir Tomer  
*STOC 2025, QIP 2025*
2. **Commitments from Quantum One-Wayness** [[ePrint](#)]  
Dakshita Khurana, Kabir Tomer  
*STOC 2024, QIP 2024*
3. **Weak Zero-Knowledge via the Goldreich-Levin Theorem**  
Dakshita Khurana, Giulio Malavolta, Kabir Tomer  
*ASIACRYPT 2023*
4. **OpenVoting: Recoverability from Failures in Dual Voting** [[ePrint](#)]  
Prashant Agrawal, Kabir Tomer, Abhinav Nakarmi, Mahabir Prasad Jhanwar, Subodh Sharma, Subhashis Banerjee  
*EVOTE-ID 2023*

## RESEARCH EXPERIENCE

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- PhD Research with Dakshita Khurana (UIUC)** Aug. 2022 - Present  
Working on uncovering the minimal required assumptions for quantum cryptography.
- Research Internship with Vipul Goyal (NTT Research)** May 2024 - Aug. 2024  
Worked on expanding current definitions of commitments to quantum states.
- M.Tech Research with Venkata Koppula (IIT Delhi)** Jan. 2021 - Mar. 2022  
Studied selective-opening security for DHIES and OAEP in the quantum random oracle model.
- Undergraduate Research with Subhashis Banerjee (IIT Delhi)** Jan. 2019 - Aug. 2020  
Worked on recoverable end-to-end secure electronic voting schemes.

## AWARDS & ACHIEVEMENTS

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- **Chirag Foundation Graduate Fellowship in CS (2022)**: Awarded by CS Department, UIUC
- **Institute Silver Medal (2022)**: Highest GPA in department, IIT Delhi.
- **Quadeye Excellence Scholarship (2021)**: For academic performance, IIT Delhi.
- **Olympiads and Competitions**:
  - **JEE Advanced (2017)** (All-India Rank 111)
  - **Indian National Astronomy Olympiad (2017)** (Top 35)
  - **National Standard Examination in Chemistry (2017)** (Top 300)
  - **Kishore Vaigyanik Protsahan Yojana Scholarship (2015)** (All-India Rank 14)
  - **National Talent Search Examination (2014)** (Top 1000)