# **Privacy-Preserving Group Recommendations**

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### **Abstract**

In this paper we present privacy-preserving group recommendations so that users can collectively compute recommendations.

# Introduction

In this paper, we present a simple method for computing group recommendations.

### **Related Work**

Helios [1] and Belenios [2]

## **ElGamal**

$$rac{\prod_k m_k (pk)^r}{\prod_k (g^r)^{sk}} = rac{\prod_k m_k g^{r_k r}}{\prod_k g^{r_k r}} = \prod_k m_k = g^{\sum_k m_k'}$$

# **Acknowledgements**

Thanks Manubot [3].

# **References**

### 1. Helios: Web-based open-audit voting

Ben Adida

Proceedings of the 17th USENIX security symposium, july 28-august 1, 2008, san jose, CA, USA (2008) http://www.usenix.org/events/sec08/tech/full\\_papers/adida/adida.pdf

### 2. Belenios: A Simple Private and Verifiable Electronic Voting System

Véronique Cortier, Pierrick Gaudry, Stéphane Glondu Foundations of Security, Protocols, and Equational Reasoning (2019) <a href="https://doi.org/grjxs4">https://doi.org/grjxs4</a>
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#### 3. Open collaborative writing with Manubot

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Manubot (2020-05-25) https://greenelab.github.io/meta-review/