



**Recap**



- ▷ **Short Schnorr signatures** achieve  $k$  bits of **multi-user security** (of length  $3k$  bits)
- ▷ **Key-prefixed** short Schnorr signatures achieve  $k$  bits of multi-user security against **preprocessing attacks** (of length  $3k + \log S$  bits)
- ▷ **Standardized implementations** of short Schnorr signatures achieve  $k$  bits of multi-user security against **preprocessing attacks** (of length  $3k + \log S$  bits)
- ▷ We extend Coretti et al.'s BF-to-AI technique to work in **multiple idealized models**

# **Open Questions**

## Security Bound


Key-  
Prefixed

$$\varepsilon \leq \mathcal{O} \left( \frac{q^2 S \log p}{p} + \frac{q}{2^k} \right)$$

Standard-  
dized

$$\varepsilon \leq \mathcal{O} \left( \frac{q 2^k S}{p} + \frac{q}{2^k} \right)$$

→ improved bound?



Can we use this technique to  
other cryptographic primitives?  
(e.g., Oblivious Transfer)

# Recap

- ▷ **Short Schnorr signatures** achieve  $k$  bits of **multi-user security** (of length  $3k$  bits)
- ▷ **Key-prefixed** short Schnorr signatures achieve  $k$  bits of multi-user security against **preprocessing attacks** (of length  $3k + \log S$  bits)
- ▷ **Standardized implementations** of short Schnorr signatures achieve  $k$  bits of multi-user security against **preprocessing attacks** (of length  $3k + \log S$  bits)
- ▷ We extend Coretti et al.'s BF-to-AI technique to work in **multiple idealized models**

## Open Questions

	Security Bound
Key-Prefixed	$\varepsilon \leq \mathcal{O} \left( \frac{q^2 S \log p}{p} + \frac{q}{2^k} \right)$
Standardized	$\varepsilon \leq \mathcal{O} \left( \frac{q 2^k S}{p} + \frac{q}{2^k} \right)$

→ improved bound?

Can we use this technique to other cryptographic primitives?  
(e.g., Oblivious Transfer)



**Thank you!**

