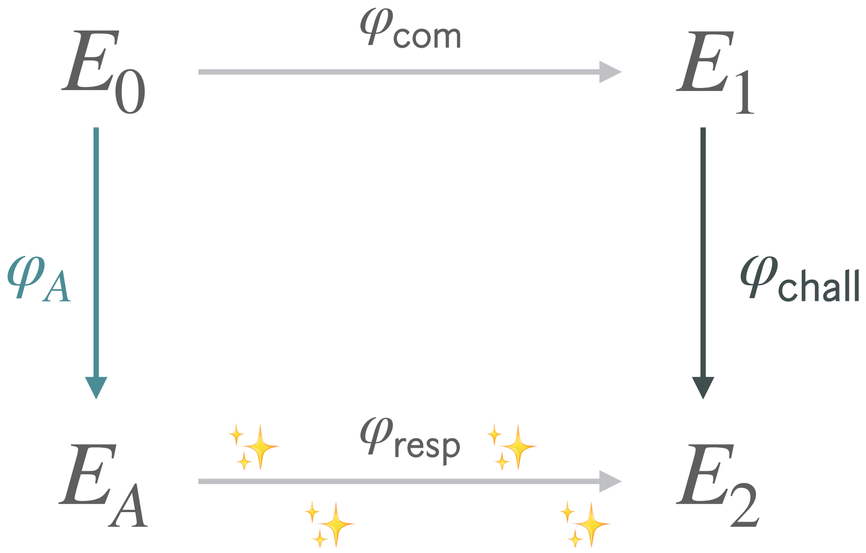
PART 3

New Dimensions

extension fields

in signing, we want to keep working over $\mathbb{F}_{p^2}$ for efficiency reasons

Idea: signing is slow anyway, what if we work over $\mathbb{F}_{p^{2k}}$ during signing, and push verification speeds to the absolute limits?



1 instead of (slow) translation of I_{resp} to φ_{resp} in 13 blocks....

2 slower translation using $\mathbb{F}_{p^{2k}}$ arithmetic but only 4 blocks!

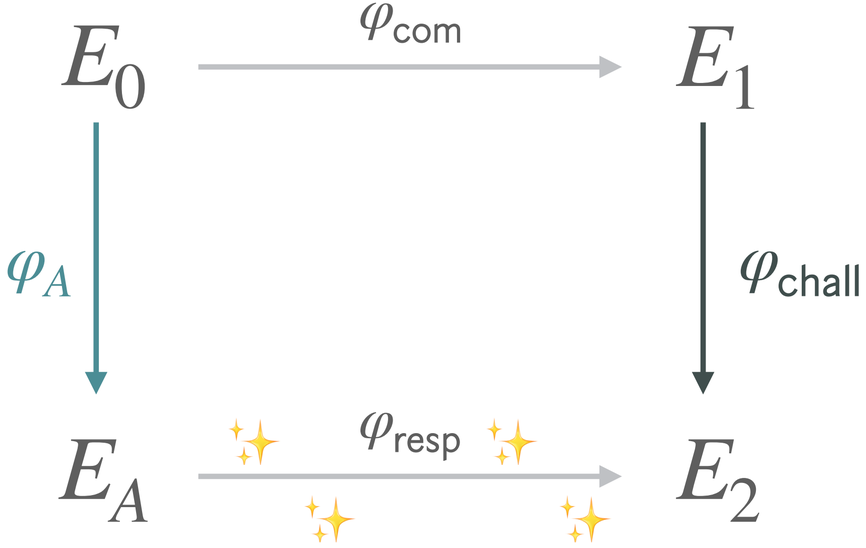
PART 3

New Dimensions

extension fields

in signing, we want to keep working over $\mathbb{F}_{p^2}$ for efficiency reasons

Idea: signing is slow anyway, what if we work over $\mathbb{F}_{p^{2k}}$ during signing, and push verification speeds to the absolute limits?



1 instead of (slow) translation of I_{resp} to φ_{resp} in 13 blocks....

2 slower translation using $\mathbb{F}_{p^{2k}}$ arithmetic but only 4 blocks!

✘ **signing is now even slower, using extension fields, takes literal seconds**