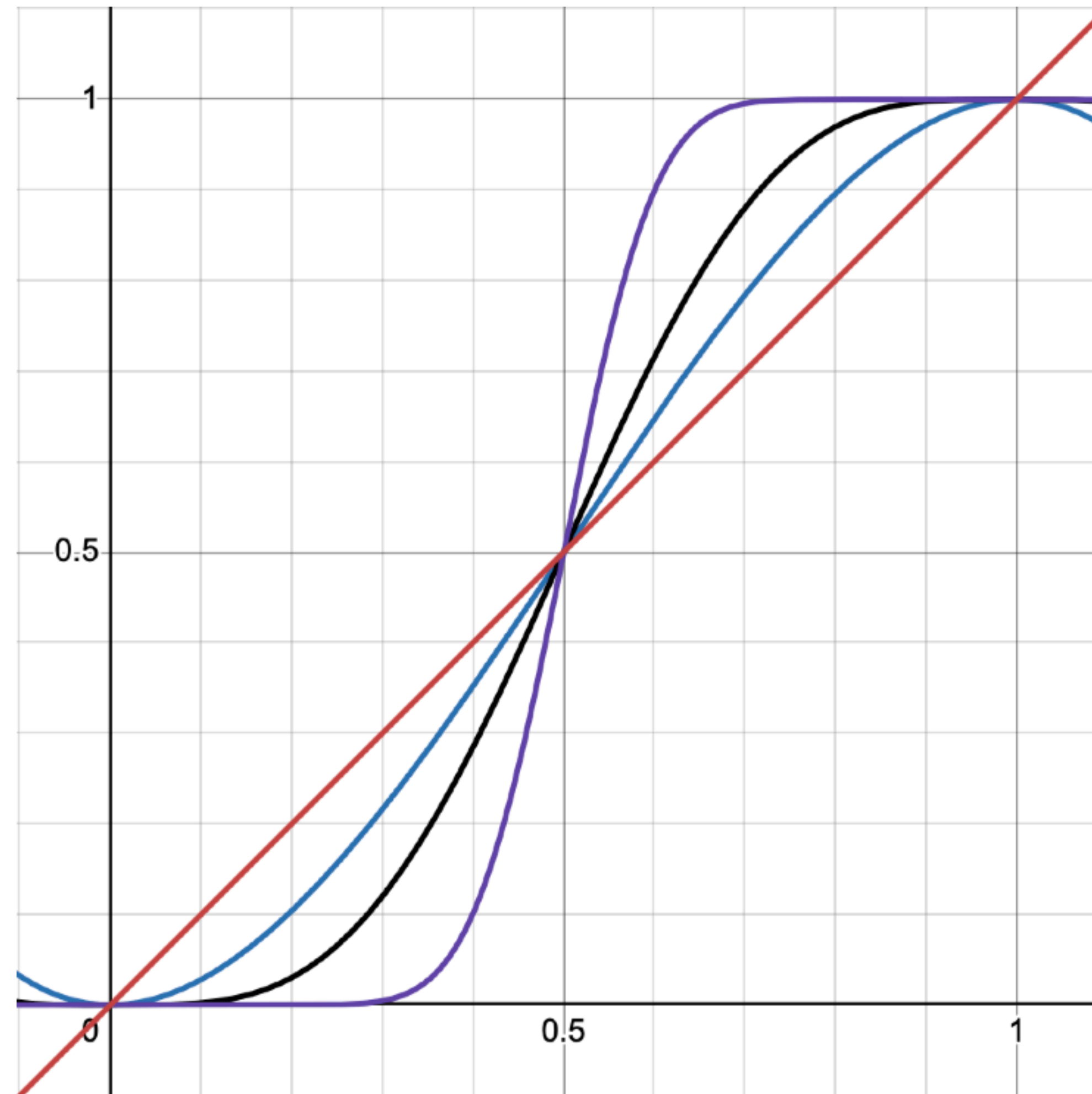# Cleaning error in CKKS

## BLEACH: Via polynomial approximation [DMPS24]

$$h_1(x) = 3x^2 - 2x^3$$

$$h_1^2(x) = (h_1 \circ h_1)(x)$$

$$h_1^4(x) = (h_1^2 \circ h_1^2)(x)$$

$$x \in [0,1]$$

# Cleaning error in CKKS

## Bootstrapping Bits with CKKS [BCKS24]

- $f_{BinBoot}(x) = \dfrac{1}{2}(1 - \cos(2\pi x))$

- Cleaning par interpolation trigonométrique

  - Séries de Taylor

  - Polynômes de Chebyshev

- Plus efficace que $h_1$ de BLEACH