

# Initial proposal

Derivation of the algorithm - step 3 on 3

## Algorithm

- ➊ run 2 *average* consensi (*P doubly stochastic*):
  - $y_i(0) := f_i''(x_i)x_i - f_i'(x_i)$        $y_i(k+1) = Py_i(k)$ ,
  - $z_i(0) := f_i''(x_i)$        $z_i(k+1) = Pz_i(k)$
- ➋ locally compute  $x_i(k) = \frac{y_i(k)}{z_i(k)}$

## That's all?

No, *must provide 2 little modifications*:

- track the changing  $x_i(k)$
- make local estimation step  $x_i = \frac{y_i}{z_i}$  less aggressive