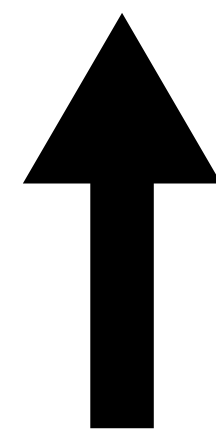# Fenchel dual problem

$$\mathbf{u}^\star = \arg\max \left\{ \frac{1}{2}\|\mathbf{y}\|_2^2 \; - \; \frac{1}{2}\|\mathbf{y} - \mathbf{u}\|_2^2 \right.$$

$$\left. - \; \frac{1}{2\gamma}\|[\,|\mathbf{A}^\top\mathbf{u}| - \lambda]_+\|_2^2 \right\}$$

A « different parametrization » of the Elastic-Net