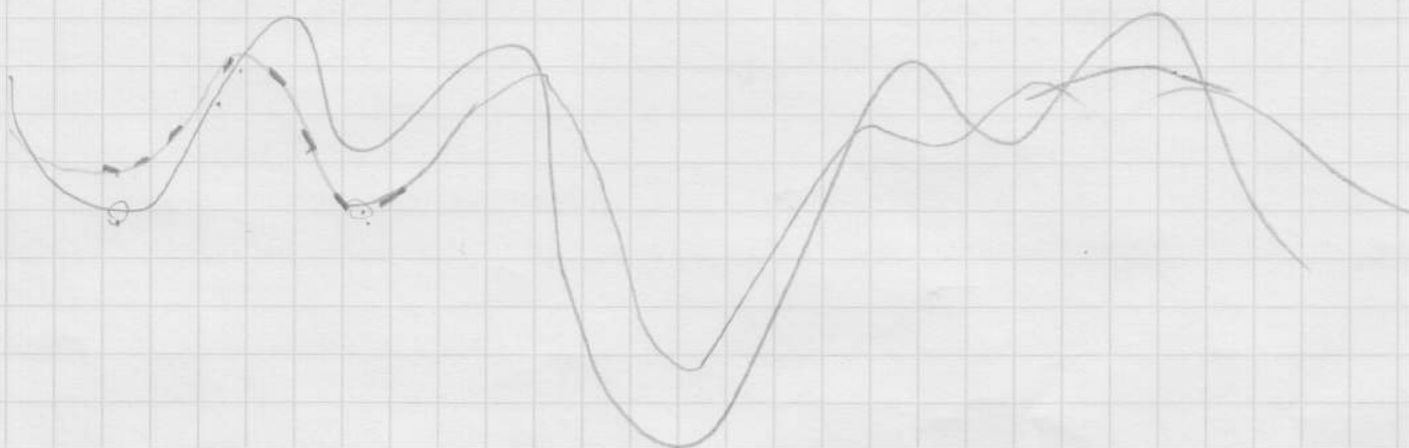
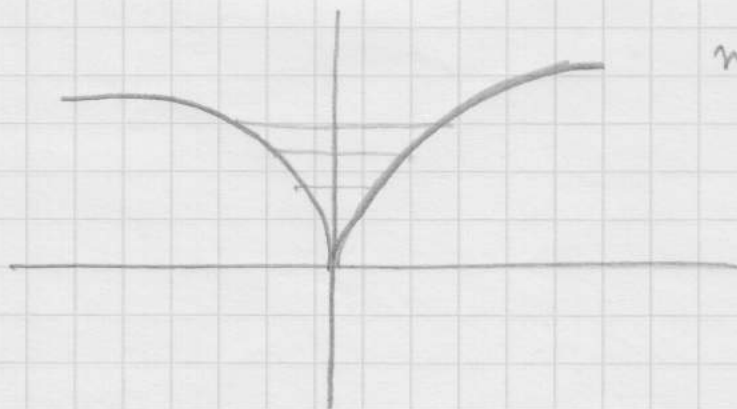




$$\begin{array}{ll} \min_{x,y} & f(x) + G(y) \\ \text{st.} & h(x) \end{array}$$

$$a^T x + b = 0$$

$$G(y) = 0$$



$$\min_x \quad l(x) + \lambda r(x)$$

$x^*(\lambda)$ solution path

$$\begin{bmatrix} 1 & 0 \\ 0 & 0 \end{bmatrix}$$

$$\begin{bmatrix} 0 & 0 \\ 0 & 1 \end{bmatrix}$$

$$\begin{bmatrix} \frac{1}{2} & 0 \\ 0 & \frac{1}{2} \end{bmatrix}$$

Fused lasso: replace $\mathbb{I}\{\beta_i - \beta_{i+1} \neq 0\}$ ←
with $|\beta_i - \beta_{i+1}|$. ←