

$$\text{sl\_fc\_gsp} := \tanh \mathbb{E}_{\sigma \in S} \left\{ \tanh^{-1} \text{corr} \left( \text{similarity}(\text{epilepsy patient}), \right. \right. \\ \left. \left. \tanh \mathbb{E}_{\tau \in \text{GSP}} \left\{ \tanh^{-1} \text{similarity}(\text{GSP cohort}) \right\} \right) \right\}$$

$$\text{similarity} := \text{corr}(\mathbb{E}_{\sigma \in S} B^{\tau}(\boldsymbol{\xi}^{\sigma\tau}, t), B^{\tau}(\boldsymbol{\eta}^{\tau}, t))$$

for BOLD time-series  $B^{\tau}(t)$  of subject  $\tau \in \text{cohort } T$ ,

voxels  $\boldsymbol{\xi}^{\sigma\tau}$  in sphere  $\sigma \in \text{searchlight } S$ ;

voxels  $\boldsymbol{\eta}^{\tau}$  are samples of the subjects' cortex in atlas space