

# Shrinkage Methods

Before: **Discrete model search methods**

$$\underbrace{\text{model fit}}_{\text{RSS}} + \text{penalty on model dimensionality}$$

Now: **Continuous model search method** (also faster)

$$\underbrace{\text{model fit}}_{\text{RSS}} + \text{penalty on size of coefficients}$$

this is called **penalized** or **regularized regression**

# Bias Variance Trade-Off

