## Machine Learning Topic 6

## Structural Risk Minimization & Complexity Regularization

## Aimee Barciauskas 29 March 2016

How do we choose a class of classifier? Approximation and Estimation errors are in conflict.

- Definition estimation and approximation errors:  $\mathit{slide}\ 1$
- Selecting classifiers using the VC dimension:  $slide\ 2$ 
  - How to minimize empirical error with regularization term:  $\mathit{slide}\ 2$
- Bound of the expected value of the data based classifer from the true risk:  $slide \ 3$
- Upper bound of the estimation error:  $slide\ 3$