

## Regularization and AdaBoost

- suggests stopping AdaBoost early is akin to applying  $\ell_1$ -regularization
  - caveats:
    - does **not** strictly apply to AdaBoost (only variant)
    - not helpful when boosting run “**to convergence**”  
(would correspond to very weak regularization)
  - in fact, in limit of vanishingly **weak** regularization ( $B \rightarrow \infty$ ), solution converges to maximum margin solution
- [Rosset, Zhu & Hastie]