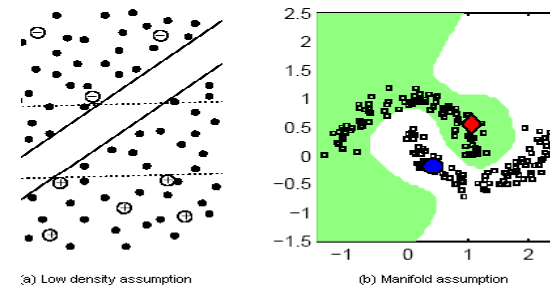
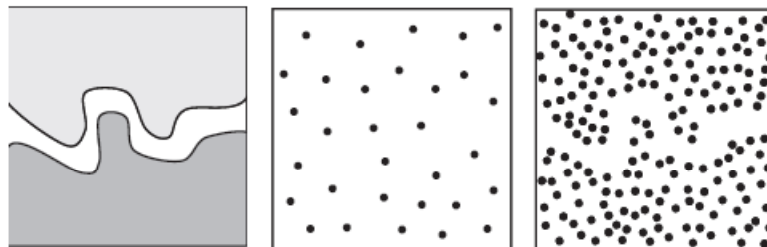


# Adaptive Regularization for Transductive Support Vector Machine

[Zenglin Xu](#), [Rong Jin](#), [Jianke Zhu](#), [Irwin King](#), [Michael R. Lyu](#), [Zhirong Yang](#)

## • Challenges in SSL

- Do unlabeled data help?
- Low density assumption vs manifold assumption?



- Regularization strength of unlabeled data
  - SVM → **no** regularization
  - TSVM → **full** regularization
  - Can we have **adaptive** regularization?

- Our trial to this goal
  - Learn a **combination** of supervised, partially regularized, semi-supervised classifiers based on **manifold smoothness**