Statistics Seminar Series

Improved Estimators for Kernel Vector Machines and Determination of Local Kernel Shape Without Cross Validation

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Friday, April 30, 2004, 4:00-5:00pm
Mathematics and Computer Science (MCS) Building, Room 149
111 Cummmington Street, Boston
Tea and Cookies at 3:30pm in MCS 153

Abstract:
We use minimax methods in reproducing kernel Hilbert space (RKHS) to choose the regularization parameter values for the standard Tikhonov estimator, derive a local bound on its error and show how to improve the standard estimator for learning class membership probabilities on a vector machine with a given kernel. An example in the classification of microarrays will be presented. After defining the Fisher information of an RKHS we propose two algorithms for determining optimal local kernel shape.

For directions and maps, please see http://math.bu.edu/research/statistics/statseminar.html. For other information, please contact Eric Kolaczyk (kolaczyk@math.bu.edu) or the main department office at (617)353-2560.