Lecture 23: Inverse operator equations, density estimation, and frame-based RKHS

Description

This class first looks at inverse operator equations and regularization approaches to solving these problems. Numerical differentiation and density estimation are two examples of inverse operator equations that will be looked at more closely. We then describe frames and describe how frames can be used to construct a RKHS.

Suggested Reading

- Bertero, Poggio, and Torre. Ill-Posed Problems in Early Vision. Proceedings of the IEEE, 1988.
- Tikhonov and Arsenin. Solutions of Ill-posed problems. W. H. Winston, 1977.
- Mukherjee and Vapnik. Multivariate Density Estimation: a SVM Approach. CBCL Paper #170/AI Memo #1653, 1999.