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STOCHASTIC CURVE ESTIMATION

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Preface

These notes are based on a regional set of lectures on curve estimation in the context of independent and dependent observations given at the University of California, Davis during June 1989. Much of these lectures is concerned with probability density or regression function estimation when observations are independent. The character of the asymptotic results (at least locally) is qualitatively the same if the observations are those of a dependent stationary sequence with short-range dependence. Research in the case of long-range dependence is recent and qualitatively of a different character. One should note that the spectral estimation (also discussed here) is of an older vintage and results there in part motivated later research on probability density estimates. Many of the results have the imprint both of stochastic methods as well as those of approximation theory.

The conference was organized by Professor George Roussas with the assistance of Professor Y. P. Mack. I should like to thank them both for their hospitality. The conference was sponsored by the Conference Board of the Mathematical Sciences and the University of California, Davis with the support of the National Science Foundation. I am indebted to Neola Crimmins who was so helpful in retyping these notes.

Murray Rosenblatt

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