

## REPORT DOCUMENTATION PAGE

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| 6. AUTHOR(S)<br>Hani Doss                                                                                                                                                                |                                                          |                                                         |                                  | AFOSR-TR-96<br><br>G121<br><br>RT                                                                      |  |
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## FINAL REPORT

Statistical Inference for Coherent Systems from Partial Information and  
Markov Chain Monte Carlo Methods

AFOSR Grant No. F49620-95-1-0066

Hani Doss, Principal Investigator

One-Year Period from December 1, 1994 to November 30, 1995

### Papers Accepted or Tentatively Accepted but not yet Published

1. Athreya, K. B., Doss, H. and Sethuraman, J. (1992). A Proof of Convergence of the Markov Chain Simulation Method. Accepted by *The Annals of Statistics*.  
(This paper was listed as tentatively accepted last year.)
2. Doss, H., Huffer, F. and Lawson, K. (1994). Bayesian Nonparametric Estimation via Gibbs Sampling for Coherent Systems with Redundancy. Tentatively accepted by *The Annals of Statistics*, subject to revision.

### Papers Published

1. Doss, H. (1994). Discussion of "Markov Chains for Exploring Posterior Distributions" by Luke Tierney. *The Annals of Statistics* 22, 1728-1734.
2. Doss, H. (1994). Bayesian Nonparametric Estimation for Incomplete Data via Successive Substitution Sampling. *The Annals of Statistics* 22, 1763-1786.
3. Li, G. and Doss, H. (1995). An Approach to Nonparametric Regression for Life History Data Using Local Linear Fitting (with G. Li). *The Annals of Statistics* 23, 787-823.

### Other Activities

1. I gave an invited talk at the Second International Workshop on Bayesian Robustness, in Rimini, Italy, May 1995. I presented the paper *Bayesian Poisson Regression using the Gibbs Sampler: Sensitivity Analysis through Dynamic Graphics*.