



The University of Chicago
Department of Statistics

MASTER'S THESIS PRESENTATION

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Department of Statistics
The University of Chicago

**Rejection Sampling for
an Extended Gamma Distribution**

MONDAY, February 7, 2011, at 11:00AM
110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

This paper describes a rejection sampling scheme for generating random draws from the distribution with the density:

$$h(t) \propto t^{\alpha-1} \exp(-t - 2\sqrt{t}\gamma)I(t > 0), \quad \alpha \geq 1$$

The sampler is particularly efficient for γ of large magnitude, and the acceptance rate is shown to have a limit of 1 when $|\gamma| \rightarrow \infty$. And the lowest acceptance rate is above 0.5 for all γ 's and $\alpha \geq 1$.