Introduction to Statistical Computing

Ting-Li Chen

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- 數大便是美　太大很麻煩

  可能算不動　可能根本不能算

- 只算少部份

  希望能很有把握答案不會差太多

Calculus

Compute

$$\int_0^1 \mathrm{L} \int_0^1 \prod_{i=1}^{18} \log(1+x_i^3 + x_{i+1}^2 / (1+x_{i+2}))dx_1 \mathrm{L}\ dx_{20}$$

Sample Rare Event

x_i from {-1,1}

$$S_k = 20 + \sum_{i=1}^{k} x_i$$

$$\tau = \inf_k \{k : S_k \geq 200 \text{ or } S_k \leq 0\}$$

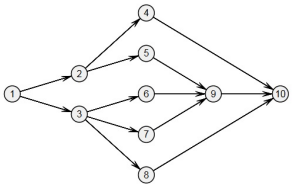
$$\Pr(S_\tau = 200) = ?$$

Sample Rare Event

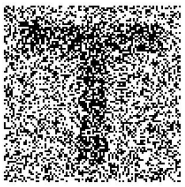
$$B_i = B_{i-1} + X_i$$

$$X_i = \alpha(T_i - T_{i-1}) - Y_i$$

Sample Rare Event



- **Denoising**



- **Decoding**