

1067-60-1963 **Victor Goodman*** (goodmanv@indiana.edu), Mathematics Department, Indiana University,
Bloomington, IN 47405. *Sensitivity Analysis of Expected Values*.

The expected value $E[f(X_t)]$ may depend on several parameters defining the diffusion process X_t . Information concerning the partial derivative of the expectation on each parameter (its sensitivity) is of great value in applied situations.

In 1999, Fournie, Lasry, and their co-authors introduced a method for computing sensitivities when the function $f(x)$ is not smooth. Their method, using Malliavin calculus to differentiate the diffusion itself, allows answers to be obtained with stochastic weights which are not unique. We discuss the generality of these weights and the limitations on the use of this method. (Received September 22, 2010)