1084-60-368

Lu Chen* (chenlu81@hotmail.com), **Omar De la Cruz Cabrera** and **Oana Mocioalca**.

Diffusion Models with Pre-specified Dirichlet Marginal Distribution. Preliminary report.

We describe a stochastic process in continuous time with a pre-specified Dirichlet distribution as invariant distribution; therefore, with the appropriate initial state, we obtain that all the marginal distributions are the specified Dirichlet.

The process is obtained as the solution of a stochastic differential equation driven by a standard Brownian motion; we describe the corresponding drift and autocorrelation function. Also, more complicated models will be discussed, such as a model driven by Fractional Brownian Motion. We also discuss applications such as modeling compositional data. (Received September 05, 2012)