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Suman Sanyal* (sanyal@marshall.edu), 25755-2560, and **Bonita Lawrence** (lawrence@marshall.edu), Department of Mathematics, Marshall University, Huntington, WV 25755-2560. *Parameter estimation of dynamic Langevin's equation and related problems.* Preliminary report.

In this talk, we introduce dynamic Langevin's equation

$$\Delta X = -\alpha X \Delta t + \beta \Delta W(t),$$

where X is a stochastic process indexed by a time scale, W is a one-dimensional Brownian motion, and α, β are constants. We present certain results related to the estimation of the parameters α and β when $t \in \mathbb{T}$, where \mathbb{T} is a time scale, i.e., a closed subset of the reals. (Received January 19, 2011)