1010-41-83 **Scott N Kersey*** (skersey@GeorgiaSouthern.edu), Department of Mathematical Sciences, Georgia Southern University, Statesboro, GA 30460-8093. *Geometric Variational Subdivision.*

We present a nonlinear subdivision scheme for parametric curves based on a variational problem. The nonlinearity arises from the choice of parametrization of the piecewise linear curves at each level of subdivision. For the case of uniform parametrizations the scheme reduces to m-point interpolatory subdivision. In this talk, we will derive the method, and illustrate effects of the (local) parametrization (on smoothness, etc.) based on computed examples. (Received August 20, 2005)