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**Adam F Childers\*** ([childers@roanoke.edu](mailto:childers@roanoke.edu)), 221 College Lane, Salem, VA 24153. *Sensitivity in Experimental Design*. Preliminary report.

We will investigate experiment designs for continuous non-linear models with repeated samples. Maximizing the determinant of the Fisher information matrix for an apriori parameter estimate provides information about a D-Optimal design (or a near V-Optimal design) but will often times not provide robustness due to sensitivity with respect to the initial parameter estimate. By defining the apriori parameter estimate to be a random variable we will consider the distribution of the determinant of the FIM to identify where and when in time to sample in order to identify robust designs. (Received September 03, 2013)