1125-35-2134 **David S Torain II*** (david.torain@montgomerycollege.edu). *Using Torain's Equations as a Predictable Model in the Sciences.*

Torain's equations are essentially a set of parametric non-linear differential equations that use an analytical tool as a mathematical model. These equations offer a global science view that computer calculations cannot provide. Since only numerical methods have been previously developed in the sciences to investigate this problem, this research proposes a new analytical approach. This approach is based on the notion that when one of the sixteen parameters of Torain's equations is sent to infinity, the general solution, involving the remaining fifteen parameters can be expressed in terms of elementary functions. This is made possible because, in this limit besides the time invariance group, an exact invariance-scaling group exists. This approach uses the science field to study the resulting mathematical model. (Received September 19, 2016)