1067-39-1069   **Priscilla Supnet Macansantos*** (`pmacansantos@yahoo.com`), University of the Philippines Baguio, Governor Pack Road, 2600 Baguio City, Philippines. *Existence Theorem for Set-Valued Differential Inclusion Using the Pseudo-integral in Pseudo-analysis.* Preliminary report.

The theory of set-valued functions and the arising differential inclusions is now an important tool in applications, particularly in economics. The initial definition for the integral of a set-valued function is due to Aumann, and this is a generalization of the integral of a point-valued function, using the idea of selections. In recent years, the area of pseudo-analysis was developed by E. Pap, et al, to further generalize concepts in analysis, such as integration, via the use of a semiring structure and generated measures. A pseudo-integral of a set-valued function was defined by Tatjana Grbic et al, and we use this to study an existence theorem for differential inclusions. Under generalized analogous conditions on the set valued function that defines the inclusion ("semicontinuity," boundedness), existence of a solution is proven. (Received September 17, 2010)