1096-VH-2139 **Keshav P. Pokhrel*** (kpokhrel@mercyhurst.edu), 501 East 38th Street, Erie, PA 16546, and **Chris P. Tsokos**. *Functional Forecasting Models for Brain Tumor Mortality Rates.*

Incidence and mortality rates are considered as a guideline for planning public health strategies and allocating the resources. We present forecasting models using functional data analysis techniques. Nonparametric smoothing methods are used to mitigate the existing randomness in the observed data. Our primary goal is to find a robust forecasting model for the mortality rates of the brain and central nervous system tumors in the United States. We also present the disparity of brain cancer mortality rates among the age groups together with the rate of change of mortality rates. In addition, we apply *principal differential analysis* to measure the noisy features of the data in a single curve and the variations of the data are also measured across the curves. The data were obtained from the Surveillance, Epidemiology and End Results (SEER) program of the United States. (Received September 17, 2013)