



## A NEW APPROACH FOR HANDLING FORECASTING PROBLEMS USING HIGH-ORDER FUZZY TIME SERIES

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**ABSTRACT**—In recent years, some researchers used high-order fuzzy time series to deal with forecasting problems. In this paper, we present a new method for forecasting the enrollments of the University of Alabama based on the high-order fuzzy time series. The proposed method uses the so-called “second order differences” of the enrollments of the previous years to determine the trend of the forecasting. The proposed method gets a higher forecasting accuracy rate than the existing methods.

**Key Words:** Fuzzy time series, Fuzzy logical relationship, High-order fuzzy time series, Second order differences