



# Department of Mathematical Sciences

Spring 2018

## Colloquium Series

March 23, 2018 at 3pm in Bell Hall 143

**Dr. Morgan C. Wang**  
University of Central Florida

### Improve Business Operation Efficient Through The Use of Automatic Intelligent Model Building System

Prescriptive analytics can be used to improve business operation, however, many constraints factors including (1) the shortage of high quality data analysts; (2) the time to develop a useful prescriptive model takes very long time; (3) the life span of prescriptive model is relative short prevent the usage of prescriptive analytics.

Automatic intelligent model building system which is capable (1) of building prescriptive model automatically with relatively short time (hours instead of weeks or months); (2) being used effectively by IT personal with adequate knowledge of data sources; and (3) deploying easily can be used to overcome all the constraints. Thus, it overcome all shortages of traditional modeling approach and it can be used to improvement business operation.

A portal type of automatic intelligent model building system has been developed. It is capable of fixing data problems such as missing values, skewness, and high cardinality. It supports neural network, decision trees, gradient boosting, rand forest and many regression algorithms. This system also attempts to open the black box to allow the user to see some insight of the modeling results such as interaction among predictors, important predictors, how to alter predictors to change the predicted values.

Two case studies will be discussed to demo the capability of how to use this system to enhance business operation. The first case study is to a precision marketing system. The second case study is on employ management system. The results from both case studies are very positive and encouraging.

For further information, please contact  
Drs. Emil Schwab or Xiaogang Su,  
[eschwab@utep.edu](mailto:eschwab@utep.edu) or [xsu@utep.edu](mailto:xsu@utep.edu)

