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## Vortragsankündigung

Seminar Regelungssysteme LV 0430L654

Dienstag, 27. Oktober 2015, 14:00 Uhr  
Vortragsort: EN 223

**Prof. Jianhua Zhang**  
East China University of Science and Technology, Shanghai, China

### “Multi-class Classification of Imbalanced Dataset via A DySMOTE-based Neural Network Approach”

Classification of imbalanced dataset is widely known to defy any standard classifier since it is hard to learn the minority class samples in the case of skewed distribution of data. To meet this challenge, existing work has concentrated primarily on data sampling methods and binary classification problems. In this talk, we will oversample the data in the minority class to learn dynamically a multi-layer perceptron (MLP) model, so-called DySMOTE, to solve both binary and multi-class classification problems. The DySMOTE approach consists of a sampling process and a dynamical selection strategy, where the probability of each sample data being selected to update the weight and threshold parameters is estimated in each epoch. The proposed approach was evaluated on 13 UCI datasets including both binary and multi-class ones. The results showed the superiority of the proposed approach to existing ones under different classification performance metrics such as area under curve (AUC) and geometric mean (G-mean).