



GDRR Program Opening Workshop August 5-9, 2019

SPEAKER TITLES/ABSTRACT

Tahir Ekin

Texas State University

“Fraud Analytics”

Fraud instances are seen in a wide range of domains such as finance, telecommunications and health care. In addition to the monetary loss, fraud results in loss of confidence to the governmental systems and diminishes the overall system quality. For instance, in health care, while overpayments are estimated to correspond up to ten percent of expenditures, they also have direct adverse impacts on patient health. Statistical methods have become crucial to handle overpayments especially given the increasing size and complexity. This talk aims to provide an overview of the challenges and opportunities of using analytical methods for fraud assessment, with an emphasis on health care systems. First, various fraud data types will be illustrated with some real world examples. Next, sampling, overpayment estimation and data mining methods will be discussed. In particular, the use of data mining methods have gained momentum to reveal hidden relationships and fraud patterns as well as for classification and prediction. The talk will conclude with a discussion of the proposed extensions in relevant domains such as handling improper payments and potential future work to address the practical needs such as integrated decision making.