## DR. ARNO SIEBES **SPEAKER**

## Cover

## **TOPIC:**

HARNESSING PATTERNS AND MDL PRINCIPLE FOR DATA MINING: INSIGHTS FROM SECURITY USE CASES

As data continues to grow exponentially, the ability to effectively distill and leverage this information becomes critical, particularly in security. This talk delves into the sophisticated use of the Minimum Description Length (MDL) principle coupled with pattern recognition techniques to enhance the clarity and efficiency of data mining practices in security applications.



Employing a simplified O/1 database model for illustrative purposes, the talk will explore strategies for reducing pattern complexity, clustering users by these patterns, and classifying behaviors within the clusters. Special attention will be given to identifying outliers, which are essential for detecting potential security threats. The session will cover the technical aspects and the necessity for interdisciplinary inputs from fields like computer science, statistics, and security studies, ensuring a well-rounded approach to tackling today's data-driven challenges.

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