

## Outline

### ROUGH SET AND ITS LOGICS

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The objective of this lecture is to introduce the theory of rough sets in some detail and finally discuss a class of logics known as “rough logics” with their syntax and semantics.

It will be amply clear at the end why these logics are beyond the probability logics and why these are necessary.

The discussion will take roughly the following route:

Basics of Rough Set Theory

The algebraic foundation of the theory.

The topological component of the theory

Introduction to Rough Logics with various rough modus ponens rules — syntax and semantics.

Possible implications of rough logics to approximate reasoning, in the presence of certain kind of non-probabilistic uncertainty.

Rough sets vis-a-vis Fuzzy sets.