



# Organization

# Lecturers

**Prof. Dr. Knut Hinkelmann**



**Prof. Dr. Holger Wache**



# Module Objective: Supporting Knowledge-Intensive Processes

- After completion of this module, the participants
  - ◆ will be able to assess which kind of knowledge representation and reasoning is adequate
  - ◆ are able to develop appropriate knowledge-based systems.
  - ◆ can value the advantages of knowledge-based systems with respect to their costs.
  - ◆ know Business Intelligence techniques to support business decisions with facts.
  - ◆ know approaches to turn data into knowledge that helps to make the right decisions.

# Module Content

- Introduction: Knowledge in processes
- Decision Tables
- Rules
  - ◆ Textual represented rule (i.e. Horn clauses)
  - ◆ Forward and backward chaining
  - ◆ Data-driven and Goal-oriented
  - ◆ Negation-as-failure
- Object-centred Systems
  - ◆ F-Logic
- Fuzzy Logic
- Human-interpretation vs. machine interpretation
  - ◆ Graphical modeling
  - ◆ Ontology-based modeling
- Machine Learning: Learning Decision Trees
- Case-Based Reasoning
- Neuronal Networks
- Business Intelligence
  - ◆ Business Performance Management
  - ◆ Data Warehousing
  - ◆ Reporting and Data Analysis

# Module Organization

- Lectures: presentations, discussions, exercises
- Assignments/homework
  - ◆ Readings to prepare lectures
  - ◆ Exercises during weeks
- Credits: 6 ECTS

# Module Schedule

	Timeslots	Lectures	Lecturer
<b>March</b>			
<b>April</b>			
Monday 20th	2pm - 6pm	4	Prof. Holger Wache / Prof. Knut Hinkelmann
Tuesday 21st	9am - 1pm	4	Prof. Knut Hinkelmann
Monday 27th	2pm - 6pm	4	Prof. Holger Wache
Tuesday 28th	9am - 1pm	4	Prof. Holger Wache
<b>May</b>			
Monday 4th	2pm - 6pm	4	Prof. Holger Wache
Tuesday 5th	9am - 1pm	4	Prof. Holger Wache
Wednesday, 6th	9am - 1pm	4	Prof. Holger Wache
Monday 11thd	2pm - 6pm	4	Prof. Knut Hinkelmann
Tuesday 12th	9am - 1pm	4	Prof. Knut Hinkelmann
Wednesday, 13th	9am - 1pm	4	Prof. Knut Hinkelmann
Monday 18th	2pm - 6pm	4	Prof. Knut Hinkelmann
Tuesday 19th	9am - 1pm	4	Prof. Knut Hinkelmann
Wednesday 20th	9am - 1pm	4	Prof. Holger Wache
Monday 25h	2pm - 6pm	4	Prof. Knut Hinkelmann
Tuesday 26th	9am - 1pm	4	Prof. Knut Hinkelmann
Wednesday 27th	9am - 1pm	4	Prof. Knut Hinkelmann

# Module Information

## Website

[http://didattica.cs.unicam.it/doku.php?id=didattica:magistrale:kebi:ay\\_1920:main](http://didattica.cs.unicam.it/doku.php?id=didattica:magistrale:kebi:ay_1920:main)

## Literatur

- ◆ No Books
- ◆ Reading material will be provided for download