Welcome to

Knowledge Engineering

Prof. Dr. Knut Hinkelmann
Dr. Emanuele Laurenzi

Organization

Lecturers

Prof. Dr. Knut Hinkelmann

Dr. Emanuele Laurenzi

About Knut

OMLAB

insiders technologies

DFK

FAW

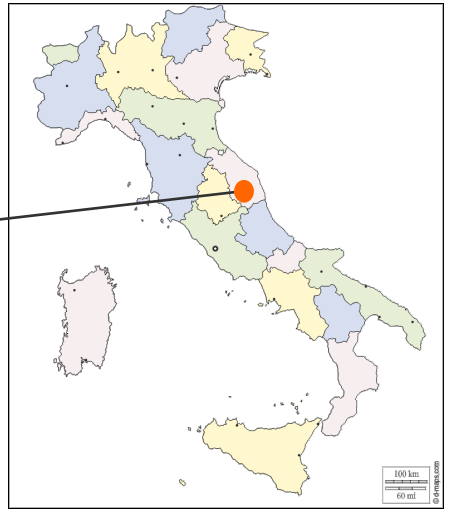
UNIVERSITÄT KAISERSLAUTERN

universität wien

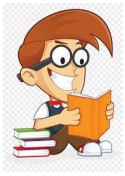
FHNW – University of Applied Sciences and Arts Northwestern Switzerland

UNICAM
Università di Camerino
1336

About Emanuele



Let's connect over LinkedIn



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Fachhochschule
Nordwestschweiz

e-lios
e-Linking online Systems

FHS St.Gallen
University
of Applied Sciences

Ph.D.

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YUNIBESITHI YA PRETORIA

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MAKEATHON

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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
  - can create conceptual models of a domain
  - 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
- Fuzzy Logic
- Knowledge Graphs
  - RDFS
  - Ontology Engineering
- Graphical Models
  - Modelling and Meta-modeling
  - Ontology-based meta-modeling
- Machine Learning
  - Learning Decision Trees

Module Organization

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

Module Schedule

March					
Monday 11th	2pm - 6pm	4	Dr. Laurenzi/Prof. Hinkelmann	Knowledge in Processes	
Tuesday 12th	9am - 1pm	4	Prof. Knut Hinkelmann	Decision-Aware Business Processes	
April					
Tuesday 2nd	9am – 1pm	4	Prof. Knut Hinkelmann	Rules	
Monday 8th	2pm - 6pm	4	Prof. Knut Hinkelmann	Rules	
Tuesday 9th	9am - 1pm	4	Prof. Knut Hinkelmann	Fuzzy Set	
Monday 15th	2pm - 6pm	4	Prof. Knut Hinkelmann	Fuzzy Set, Case Base Reasoning	online
Monday 29th	2pm - 6pm	4	Dr. Emanuele Laurenzi	Knowledge Graphs	
Tuesday 30th	9am - 1pm	4	Dr. Emanuele Laurenzi	Ontology Engineering	
May					
Monday 6th	2pm - 6pm	4	Dr. Emanuele Laurenzi	Contraints-based language (SHACL)	online
Monday 20th	2pm - 6pm	4	Dr. Emanuele Laurenzi	Ontology-based Modeling	
Tuesday 21st	9am - 1pm	4	Dr. Emanuele Laurenzi	Agile Meta-modeling	

Module Information

Website

http://didattica.cs.unicam.it/doku.php?id=didattica:ay2324:kebi:main

Literatur

- No Books
- Reading material will be provided for download