

DMKM – Data Mining and Knowledge Management Master

Vlad POSEA

13-15 November, 2017

Partners

- 6 partners
 - Univ. Lumiere of Lyon
 - Univ. Paris 6
 - Univ Torino
 - UPC Barcelona
 - Univ. Politehnica Bucharest
 - Ecole Polytechnique Nantes

Students & Program

- around 24-30/year
- The first year students chose one of the French Universities
 - local courses
 - courses taught by video from all the participants
- Second year they chose a specialization in one of the other universities
 - Barcelona
 - Bucharest
 - Torino

Diplomas

- students received diploma from
 - the French university where they studied in the first year
 - the other university where they studied in the second
- In each university the students were enrolled in a local masters' program

Courses

DMKM Management	4
Year 1	1
Semester 1	
Common Courses - Foundations	6
Local Courses	4
Semester 2	
Common Courses - Foundations	2
Local Courses	6
Specialities	
E-Science	4
Data Mining and Complex System Modelling, Application in Social Science	4
Knowledge and Decision	4
Year 2	
Semester 3	
Common Courses	3
Local Courses	6
Specialities	
Web Semantic	4
Statistical Modelling and Data Mining	4
Relational Data Mining	4
Semester 4	1
Local Courses	6

Y1S1

Semester 1

Common Courses - Foundations

- Advanced databases
- Software Methodologies
- Multidimensional Data Analysis
- Probability and Statistics
- Optimization
- Logic and Knowledge Representation

Local Courses

- Language Course - ULY2
- Language Course - EPUN
- Language Course - UPMC
- Methodology and tools for the research

Y1S2

Semester 2

Common Courses - Foundations

Methodology and Tools for Research
Symbolic Learning

Local Courses

Language Course - EPUN
Language Course - UPMC
Language Course - ULY2
Case Study - ULY2
Case Study - EPUN
Case Study - UPMC

Specialities

E-Science

Epistemology and History of Science
Bioinformatics - Sequences, Tree and Graph Mining
Opinion Mining, Technological Watch
E-health

Data Mining and Complex System Modelling, Application in Social Science

Modelling Complex Systems in Social Science
Mining Complex Data: Text, Image, Web
Complex Data Warehousing
Data Processing: Cleaning, feature selection, feature construction

Knowledge and Decision

Relational Pattern Mining
Bayesian Networks
Visual Data Mining
Ontology Engineering and Semantic Web

Y2S1

Common Courses

NUMERICAL LEARNING 2014/2015

NUMERICAL LEARNING 2013/2014

Information Retrieval

Local Courses

Language Course - UPB

Language Course - UPC

Language Course - UPO

Case Study - UPB

Case Study - UPO

Case Study - UPC

Specialities

Web Semantic

Semantic Web Applications

Data Mining

Natural Language Processing

Multi-Agent Systems

Statistical Modelling and Data Mining

Statistical Processing of Natural Language

Bioinformatics and Statistical genetics

Kernel-based Learning and Multivariate Modelling

Advanced Statistical Modelling

Relational Data Mining

Intelligent Data Analysis and Complex Systems

Image Data Mining

Statistical Relational Learning

Learning Graphical Models

Y2S2

Semester 4

Stages / traineeship

Local Courses

Language Course - EPUN

Language Course - UPO

Language Course - UPMC

Language Course - UPC

Language Course - UPB

Language Course - ULY2

Curricula

- courses generally decided by the consortium
- details on each course decided by the professor
- problem: lots of overlaps between courses

Exams

- local exams
- exams for videoconference courses
 - subjects given through videoconference
 - local supervisors from the local professors/assistants

Dissertation

- usually defended in the country where the students did the research internship
- presented via videoconference
- evaluation committee with representatives from all the consortium
- ranking and grading based on French system

Scholarships

- from Erasmus Mundus funds
- very few students were self-funded
- the master was very expensive for our average applicant
- very many applicants from African countries

Research internship

- during the 4th semester of study
- around 70% found internships in companies or other research institutions
- the rest did internships in the universities of the consortium
- dissertation had the structure of a research paper and was reviewed as such
- the student had a supervisor from one of the universities in the consortium and another from the institution that hosted the internship