

<http://kt.ijs.si>

CONTACT
Department of Knowledge Technologies
Jožef Stefan Institute
Jamova 39
1000 Ljubljana
Slovenia
<http://kt.ijs.si>
tel. +386 1 477 3175
fax +386 1 477 3315

HEAD
Nada Lavrač
nada.lavrac@ijs.si

DEPARTMENT OF
**KNOWLEDGE
TECHNOLOGIES**

Jožef Stefan Institute

DEPARTMENT OF
**KNOWLEDGE
TECHNOLOGIES**

Jožef Stefan Institute

KNOWLEDGE
MANAGEMENT

DATA MINING
MACHINE
LEARNING

SEMANTIC
WEB

TEXT
WEB
MULTIMEDIA
MINING

DECISION
SUPPORT

HUMAN
LANGUAGE
TECHNOLOGIES

DEVICES

LEARNED
MEDIA

TECH
VIDEO
AUDIO

SERVICES
LEARNED

LEARNED
MEDIA

SERVICES
LEARNED

LANGUAGE

JA

ETY

INCLUSI

RF

ESAFETY

ON

LANGUAGE

IGITISE IC

DEPARTMENT OF KNOWLEDGE TECHNOLOGIES

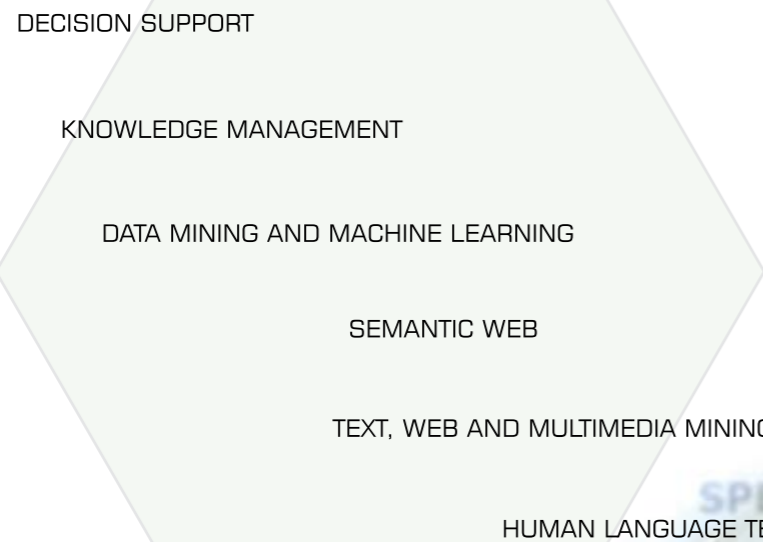
Our goal is to advance cutting-edge research and applications of knowledge technologies, including data mining, machine learning, decision support, human language technologies, knowledge management and other information technologies that support the acquisition, management, modeling and use of knowledge and data.

We have authored and edited numerous scientific books and successfully coordinated European projects and networks. In the 6th Framework programme we became partners of 16 European research projects.

Our technologies have been successfully applied to many practical problems, including selection of applicants for loans of the National Housing Fund, analysis of UK traffic accidents, medical diagnosis, analysis of the Slovenian public healthcare system, improving the functionality of Microsoft Internet Explorer and analysis and visualization of European IST research projects.

The department consists of 24 researchers, 10 students and technical support staff.

MAIN RESEARCH AREAS



DECISION SUPPORT
KNOWLEDGE MANAGEMENT
DATA MINING AND MACHINE LEARNING
SEMANTIC WEB
TEXT, WEB AND MULTIMEDIA MINING
HUMAN LANGUAGE TECHNOLOGIES

MAIN APPLICATION AREAS



ECOLOGY
MEDICINE
HEALTHCARE
ECONOMY
MARKETING
AGRICULTURE

EU 6TH FRAMEWORK PROJECTS

NeOn - Lifecycle Support for Networked Ontologies
ECOLEAD - European Collaborative Networked Organizations Leadership Initiative
TAO - Transitioning Applications to Ontologies
SWING - Semantic Web Services Interoperability for Geospatial Decision Making
Tool-East - Open Source Enterprise Resource Planning and Order Management System for Eastern European Tool and Die Making Workshops
E4 - Extended Enterprise management in Enlarged Europe
SIGMEA - Sustainable Introduction of Genetically Modified crops into European Agriculture
SEKT - Semantically-Enabled Knowledge Technologies
IST-World - Knowledge base for RTD Competencies in Information Society Technologies
PASCAL - Pattern Analysis, Statistical Modeling and Computational Learning
IQ - Inductive Queries for Mining Patterns and Models
KD-ubiq - A blue print for ubiquitous knowledge discovery systems
IMAGINATION - Image-based Navigation in Multimedia Archives
ALVIS - Superpeer Semantic Search Engine
SMART - Statistical Multilingual Analysis for Retrieval and Translation
CEC-WYS - Central European Centre for Women and Youth in Science

SOFTWARE AND SERVICES

SD, CN2-SD, APRIORI-SD - Subgroup discovery algorithms, part of the Orange data mining suite [Python, open-source]
RSD - Relational Subgroup Discovery through first-order feature construction [Yap Prolog, open-source]
Text Garden - Text Mining suite of software tools [C++, open source]
DEXi - Multi-attribute modeling for Decision Support [Delphi, freeware]
CIPER - Constrained Induction of Polynomial Equations for Regression [C++, freeware]
MLC4.5, MLJ4.8 - Learning to combine classifiers with meta decision trees [C and Java, open source]
Lagrange/Lagrange - Learning algebraic and ordinary differential equations [C, open source]
Analysis and visualization of EU RESEARCH projects (IST-World) [on-line service]
Multi-lingual lemmatizers, concordances, dictionaries [on-line service]

SOLOMON SEMINAR LECTURE VIDEOS

<http://solomon.ijs.si>

The Department collaborates with the Institute's
CENTER FOR KNOWLEDGE TRANSFER
IN INFORMATION TECHNOLOGIES
<http://ct3.ijs.si>

Department members also teach at the
JOŽEF STEFAN INTERNATIONAL
POSTGRADUATE SCHOOL
<http://mps.si>