



Martin Gjoreski

Student Researcher

Jozef Stefan Institute

<http://dis.ijs.si>

Bilateral Meetings

- November 13, 2015 (01:30 pm - 03:30 pm)
- November 13, 2015 (11:00 am - 01:00 pm)

Description

The principal goals of the **Department of Intelligent Systems** at the **Jozef Stefan Institute** are to develop new methods and techniques for intelligent computer systems, with applications in the areas of the information society, computer science and informatics, and network communication systems. The main research areas are ambient intelligence, computational intelligence, agent modelling, and language and speech technologies.

Ambient Intelligence - Ambient intelligence aims at increasing the quality of life by introducing the technology into our everyday environment in a way that places minimal burden on the user. Due to the rapid aging of the population, care for the elderly and telemedicine are among the area's main goals, but applications for the general population, such as smart buildings, are also important. A prerequisite for ambient intelligence is understanding the user's situation and needs, which we address by analyzing human behavior using various sensors. We work with many sensor types, but have particularly extensive experience with: smartphone sensors, dedicated inertial sensors, real-time location systems, infrared motion capture. We work on a wide range of ambient intelligence tasks, for example: **activity recognition, human energy expenditure estimation, fall detection, psychological stress detection, etc.**

Machine Learning and Data Mining - We are mainly focused on developing algorithms that produce human-readable and interpretable classifiers, developing algorithms and tools that enable a human expert to actively participate in the knowledge extraction process and adapting existing algorithms for specific applications.

Natural Language Processing - In the field of speech and language technologies we work on speech synthesis, forensic speaker recognition, semantic analysis of text and question answering.

Computational Intelligence - We study extensions of evolutionary algorithms for multiobjective optimization and their parallelization, and apply these algorithms in engineering design and optimization problems.

Organization Type

R&D organizations, ICT clusters

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Areas of Activities

Software and hardware companies

ICT services and products

ICT solutions for industry

ICT in R&D