

Overview of the Mobility Research Plan

Universitat Politècnica de València

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Introduction

FraMework for Agent Gamification Based on Ontologies (MAGO) is the informal title of the mobility funded by the Croatian Science Foundation and the EU, and the accompanying research that focuses on researching, modelling, and implementing an **ontology-based agent gamification framework** applicable to multiagent systems (MASs).

A senior teaching assistant at the University of Zagreb **Faculty of Organization and Informatics**, and a member of the Artificial Intelligence Laboratory at UNIZG FOI.

Main scientific interests can be found in:

- multiagent systems,
- semantic modelling,
- gamification,
- artificial intelligence,
- computer games.

One of the teachers in the following courses, in Croatian or English:

- Internet Security,
- Introduction to Artificial Intelligence,
- Declarative Programming,
- Database Theory,
- Multiagent Systems,
- Introduction to Computer Games,
- Computer Games Development,
- Computer Game Development Platforms.

Engaged in international activities and promoting international relations:

- an Erasmus student at **Karl-Franzens University of Graz** (AT),
- an Erasmus intern at **Jožef Stefan Institute** in Ljubljana (SI),
- an Erasmus+ intern at **Elettra Sincrotrone** in Trieste (IT),
- on a research stay at **Universitat Politècnica de València** in Valencia (ES),
- an ITEC student at **Centre for Development of Advanced Computing in NOIDA** (IN).

Introduction

Publications



Project activity



BSc and MA Mentees



Overview

	Part I	Part II
Phase A	MAS ontology	gamification ontology
Phase B	MAS framework	gamification framework

Table 1: Research in a nutshell: two parts, two phases each

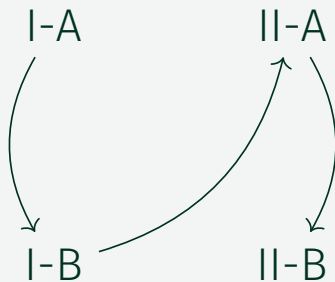


Figure 1: The flow between the parts and the phases

Overview

Detailed Overview

Part I-A

Modelling an **ontology** featuring organisational concepts, towards implementing a framework for **instantiating agents** based on the contents of the ontology **and running a MAS** based on a knowledge base.

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Part I-B

Designing, developing and implementing the **framework for instantiating** and running a MAS described using an ontology. Implementing a **testbed environment** for applying, testing and evaluating the developed ontology.

Part II-A

Modelling, developing, and implementing **an ontology for describing video games** as intelligent virtual environments (IVEs). Modelling, developing, and implementing **an ontology for describing gamification** and gamified systems, with a special focus on applicability to artificial agents.

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Part II-B

Designing, developing and implementing the ontology-based **agent gamification framework** as an upgrade of the framework from Part I-B. Implementing a **testbed environment** for applying, testing and evaluating the developed ontology.

Expected Results

Expected Results: Dissemination

Description	Quantity	Unit of Measurement
International scientific conferences	6	Papers accepted for publication
Presentations at international scientific conferences	3	Presented papers
International scientific journals	3	Papers submitted for review
Presentations at international professional conferences	2	Presented or accepted papers
Presentation of results to the sending organisation	1	Held presentations
Presentation of results to the host organisation	1	Held presentations

Table 2: Expected results related to dissemination of the results

Expected Results: Teaching, Projects etc.

Description	Quantity	Unit of Measure
Guest lectures by the young researcher	2	Delivered lectures
Guest lectures by teachers of the host organisation	2	Delivered lectures
International project, applied for funding	1	Project applications
Multi-month scientific improvement of a UPV TA	1	Agreed improvements
Informal dissemination	32	Public posts on social networks

Table 3: Expected results related to teaching, project cooperation etc.

Acknowledgement

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