

**Improving Quality of Science  
Teacher Training in European  
Cooperation  
IQST**

**Number of the contract: 128747-CP-1-2006-1-CZ-Comenius-C21**

**Project duration: 3 years**

**The overall aim** of the project as well as its **specific objectives**.

**The overall aim** is to:

- contribute to the improvement of the quality of initial science teacher training in the participating countries;
- analyze and compare teacher training program's, review and develop training modules;
- provide insights into the strategic aspects of teacher training; allow for interchange of ideas amongst practicing sciences teachers and teacher trainers in an international setting;
- provide a framework for individual to extend and develop relevant elements of his/her own competence;
- enhance the participants' knowledge of aspects of European dimension and the principles of constructivist theory in science teacher training;

**The specific objectives** are the following:

- To explore and develop new ways of initial training for science teachers based on European cooperation;
- To establish cooperation and partnership between participating departments;
- To design 5 new modules for science teacher training: Teaching Science for Understanding - a human constructivist view; Assessing Science for Understanding - a constructivist approach; European Dimension in Integrated Science Education; Using the Laboratory to Enhance Student Learning and Scientific Inquiry; Student Learning and the Science Curriculum;
- To implement European dimension in the newly designed modules;
- To introduce new pedagogical methods based on constructivist approach in science teacher training;
- To design teaching and learning materials for science teaching at initial teacher training;
- To make students training to be teachers and their tutors aware of new pedagogical methods based on the constructivist approach;
- To present these materials on web site of the project;
- To disseminate the project knowledge and experience on educational conferences and in educational journals;
- To implement and develop portfolio assessment of prospective science teachers;
- To disseminate successful outcomes by means of designed modules and a collection of training materials with the best European practice.

All partners will contribute, design to the production of the outputs. Each partner will be responsible for preparation and design of 1 module. Modules will be available in e-learning version and on web site. Partners will produce modules and training materials which will support learning activities of students. Production will be distributed among partners. These will be edited as a group at a meeting and published and disseminated. These modules will be implemented in the teacher training in each institution. New partnership and learning community will be established under this project between cooperating institutions. Partners will share experience in using modules and training materials in their initial science teacher training.

**Project coordinator:**

Palacky University, Czech Republic

**Websites:**

<http://www.iqst.upol.cz/part-inst/part-inst-5.html>

[http://www.gutcsu.lt/comenius/comenius\\_gutcsu\\_en.htm](http://www.gutcsu.lt/comenius/comenius_gutcsu_en.htm)

**Project partners:**

- Palacky University,
- Siauliai University, NSERC, Lithuania
- University of Cyprus, Cyprus
- Plovdiv 'Paisii Hilendarski' University, Bulgaria
- Ataturk University, Turkey





SIXTH FRAMEWORK  
PROGRAMME



ŠIAULIŲ  
UNIVERSITETAS

SPECIFIC TARGETED RESEARCH OR INNOVATION PROJECT



# Augmented Reality In School Environments

## General Information

Project acronym: ARiSE

Project duration: 01.01.2006-31.12.2008

### Project Partners:

Fraunhofer IAIS - Competence Center Virtual Environment /Germany/ <http://www.iais.fraunhofer.de>

National Institute for R&D in Informatics - ICI /Romania/ <http://www.ici.ro/>

Czech Technical University in Prague /Czechia/ [http://www.cvut.cz/Home\\_en?set\\_language=en](http://www.cvut.cz/Home_en?set_language=en)

Siauliai University, Natural Science Education Research Centre /Lithuania/ <http://www.gutc.su.lt>

AcrossLimits Limited /Malta/ <http://www.acrosslimits.com/>

Juventa Basic School /Lithuania/ <http://siauliai.mok.lt/juventa/>

Rabanus-Maurus Gymnasium /Germany/ <http://www.rmg-mainz.de>

**PROJECT WEB-SITE : <http://www.arise-project.org/>**

This project is co-funded by the European Union through the IST programme under FP6 with the contract number IST-027039.

## New teaching platform – “Spinstube”

ARiSE will develop a new technology, the Augmented Reality Teaching Platform (ARTP) by adapting existing augmented reality (AR) technology for museums to the needs of students in primary and secondary school classes.

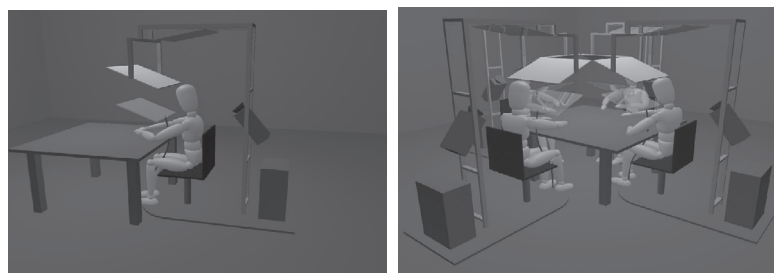


Figure 1. An idea of Teaching Platform (AR) prototype



Figure 2. First prototype of Teaching Platform (AR)

The aim is to create an innovative teaching aid, enabling teachers to develop, with a moderate effort, new teaching practices for teaching scientific and cultural content to school classes in an easy to comprehend way. Using 3D presentations and user-friendly interaction techniques will lead to a better understanding of scientific and cultural content coupled with high student motivation. The students will have the possibility to interact together with the virtual objects in a virtual shared space provided by an AR display system and thereby perform learning by doing instead of learning by reading or listening.

Furthermore, the new technology will promote team work, collaboration between classes in the same school or even remote collaboration between schools in different countries in a learner-centered approach.

## WORK PACKAGES FOR SIAULIAI UNIVERSITY

- WP4; Task 4.1: Preparation of design of representative lessons.
- WP4; Task 4.2: Conceptual reasoning for didactic of ARiSE.
- WP5; Task 5.3: Pedagogical evaluation of the created technology .
- WP6; Task 6.2: Analysis of the current teaching situation.
- WP7; Task 7.1: Dissemination.

## RESULTS OF THE FIRST YEAR

Research was conducted from 8 to 12 November 2006 in AcrossLimits Limited, Malta which is a dynamic Maltese commercial entity with its roots firmly derived from the new technology and media sector. The organization went into partnership with project ARiSE and was under obligation to organize the first summer school. Following the research plan, the learners were surveyed in the summer camp in Malta. To conduct research, testing, questioning and monitoring were applied.



Figure 3. Learners from Lithuania in the summer camp in Malta

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### ANNOUNCEMENTS

- International Scientific-Conference USING INFORMATION & COMMUNICATION TECHNOLOGIES IN THE PROCESS OF SCIENCE EDUCATION, 5-7 December 2007, Siauliai, Lithuania.
- International Scientific-Conference USING INFORMATION & COMMUNICATION TECHNOLOGIES IN THE PROCESS OF SCIENCE EDUCATION, 30/November 03/ December 2008, Siauliai, Lithuania

All necessary information you will find on the Internet site: <http://www.iktgu.projektas.lt/indexen.htm>

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 Natural Science Education Research Centre,  
 FP6 international research project "ARiSE"

International scientific-practical conference

**INFORMATION & COMMUNICATION TECHNOLOGY  
 IN NATURAL SCIENCE EDUCATION**  
 2-5 December 2007, Siauliai University, Lithuania

The Natural Science Education Research Centre of the Department of Education at Siauliai University and scientific-methodical centre "Scientia Educologica" organize an international scientific-practical conference on the issues of using information and communication technology (ICT) in the process of natural science education (NSE). The conference brings the experts of education system management, representatives of non-governmental organizations, teachers working in higher or comprehensive schools as well as those involved in extracurricular activities together at the Siauliai University (P.Visinskio Street 25, Siauliai) on 2-5 December 2007. Additional information on the event is available on the Internet site <http://iktgu.projektas.lt/indexen.htm>.

Main questions to be discussed:	Deadlines	
<ul style="list-style-type: none"> <li>• Changes in NSE in the context of modern ICT;</li> <li>• The individualization possibilities of the NSE process using ICT;</li> <li>• Proportion of instructive to constructive education in the NSE process using ICT;</li> <li>• Experience of ICT usage/implementation in the NSE process;</li> <li>• Ergonomical, ecological, philosophical, psychological, social and didactical aspects of using ICT in the NSE process;</li> <li>• ICT usage/implementation in the NSE process: development and tendencies;</li> <li>• Computer literacy of the NSE process participants;</li> <li>• Science teachers' competence and its development in the field of using ICT;</li> <li>• Virtual teaching/learning environment and its usage in the process of teaching sciences in comprehensive school;</li> <li>• The possibilities of using virtual, mixed and added reality in the NSE process.</li> </ul>	Registration	30 September 2007
	Submitting articles	30 September 2007
	Revising articles and contacting authors	15 October 2007
	Final confirming of participation	1 November 2007
	Participation fee	At the beginning of the conference
	For contacts:	
	E-mail address: <a href="mailto:iktgu@yahoo.com">iktgu@yahoo.com</a>	
	Partners of the conference	
	Lithuanian Association of Physics Teachers, Lithuanian Association of Geography Teachers Lithuanian Association of Informatics Teachers.	

