

Subj: Invitation - MPTL14 - Udine (Italy) 23-25 September 2009

Dear colleagues

it is a great pleasure to invite you to the MPTL14 Workshop.

It will be held 23-25 September 2009 in Udine, Italy.

In the following you will find a brief description, the important dates and the web address page

<http://www.fisica.uniud.it/URDF/mptl14/>

Looking forward to welcoming you in Udine.

Sincerely yours

Marisa Michelini

MPTL 14

International Workshop on

Multimedia in Physics Teaching and Learning – 14th

23-25 September 2009

University of Udine, Italy

<http://www.fisica.uniud.it/URDF/mptl14/>

organised by:

Multimedia in Physics Teaching and Learning Group

in cooperation with

European Physical Society – Physics Education Division

MERLOT Physics

and

University of Udine, Italy

With the support of

University of Cosenza

University of Modena and Reggio Emilia

University of Trento

under the patronage of

Group International de Research in Physics Education - GIREP

MOSEM1 and MOSEM2 European Projects

SPEPS2 European Project

Conceptual Learning of Science - CoLoS

SCIENTIFIC PROGRAMME

The MPTL Workshops are an opportunity where different communities involved in Multimedia (MM) in Physics Education can meet and share ideas and experience. Many activities are undertaken: comparison, production, analysis and research for the Multimedia in Physics Education, as described in the website www.mptl.eu.

The main goals are:

1. **Designing Multimedia for teaching/learning physics:** web environments, Open Source Physics (OSP) project, internet on-line services, internet portals, learning objects, java applets, tools and instruments, remote labs, teaching/learning materials.
2. **Multimedia for the teaching and learning process:** integrating Multimedia in the curriculum, Multimedia supports to the learning in different topics, worldwide software products, the contributions by the European working group "Multimedia in Physics Teaching and Learning" and the MERLOT/Physics Editorial Board. Interactive computer-based curricular material. Multimedia in distance learning and in the lab. Modelling and integrated tools to improve learning.
3. **Research and physics education:** multimedia in applied sciences, physics education research on multimedia to improve teaching and learning physics.

In Udine 2009 MPTL14 Workshop specific emphasis will be on Multimedia as one of the main powerful tools now available in physics education, such as lab-work, web search, modeling, computational activities, chalk and talk presentation, active and interactive home-work:

- 1) Integration of Multimedia in class work and lab activities. The contribution for learning, the benefit of integrating MM in current physics education activities or in educational paths for different topics and students groups: examples from experienced teachers or from physics education research.
- 2) The role and contribution of Multimedia to teaching/learning of specific physics topics and integrated MM activities such as Modeling and on-line measurements in school work, in home-work and in distance learning.
- 3) Multimedia as a learning environment and resource for scientific education in primary and secondary schools.

MPTL 14 hopes to gather together teacher trainers, scientist from universities and industry, researchers in education and school teachers united in a common aim to improve the quality of physics education.

❖ TOPICS.

Multimedia Contribution to Teaching/Learning of:

- modern physics topics,
- classical physics topics, related with the analysis of the multimedia resources for different topics with particular emphasis on optics (see earlier reports at www.mptl.eu)
- science in primary education.

❖ ASPECTS

- Integration of MM materials in physics teaching/learning.
- E-learning and distance learning.
- Computer-controlled apparatus: on-line computer measurements and remote labs.

- Modelling and simulations.
- Animation and symbolic representation
- Movie and video: role in education and support into empirical research.
- Artificial intelligence.

❖ THEMES FOR CONTRIBUTIONS

T1: Integrating MM in Physics Teaching/Learning Paths and the role of MM and computer resources, as Java applets and Physlets, to promote innovative teaching.

T2: Design and use electronic material: textbooks, learning-objects, Java applets, MM tools and Physlets.

T3: Active learning strategies with MM for education and teacher training: interactive learning, inquiry methods, problem solving, real time measurements and modeling to overcome conceptual knots in physics learning.

T4: MM for learning the basic concepts of science in primary and secondary school and teacher education.

T5: Web-environments, Internet portals, Internet on-line services for physics teaching and learning.

T6: Designing and using MM and ICT in physics lab and remote lab.

T7: MM materials and tools for evaluation of learning outcomes.

ORGANIZATION

The Workshop will host 4 Plenary Talks, Panel Sessions, Workshops, Interactive Poster Session and Poster Session.

The four Plenary Talks (PT) will be devoted to the main topics related to the MPTL14, like integration of multimedia in teaching and learning, research based proposals to improve innovations in physics teaching and learning: tools, materials, strategies and methods for physics learning.

Contributions from participants will be presented in Panel Session (PS) (in thematic parallel sessions, if necessary)

Workshops (WS) will be organized on specific topics in parallel, depending on contributed proposals on specific areas and topics such as modeling for physics education, remote lab, The workshop's goal is to create the situation in which the participants can work together on the topics proposed. Each workshop will consist of 4 parts: 1) first and general view on the problem involved in the subject, 2) preliminary discussion of the most important problem considered, 3) insight into some specific aspects of the most important problem, 4) general summary.

An Interactive Poster Session (IPS) will be introduced by a 2 minute presentation of the posters in plenary session and will be an opportunity for hand-on experience of the MM proposals.

A specific session, where young researchers can expose their works will be organized.

Important DATES

15st April 2009 for:

- (1) Submission of proposal for Workshop (s)

15st May 2009 for

- (2) Registration [via internet]
- (3) Request for room reservation in Student Dormitory (Hotel reservation will be done directly by participants – see the list of the hotels with reduced rate for MPTL14)
- (4) Submission of abstracts

1st June 2009 for sending proof of bank transactions for:

- (5) registration fee (100 € per person; 80 € for Individual Ordinary Members of EPS; 60 Euro for students)
- (6) reservation (50,00€ per person) in student dormitory

31 July 2009 for:

- (7) full text of contributions, to be considered for workshop discussions and web publication of the proceedings
- (8) Cancellation with 100% refund

People in charge

Leopold Mathelitsch and Marisa Michelini - responsibility for MPTL14

Lorenzo Santi - Interactive Poster Session

Alberto Stefanel - Pannel Session

Giacomo Bozzo - Oral Presentation supports

Stefano Vercellati - Contact with participants

Rossana Viola - Contact with partecipants

Giampiero Meneghin - web-site

Filippo Pascolo, Giorgio Salemi, Alberto Sabatini, Mauro Sabadini - hardware and software technical support

Secretariat

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