



**Center for
Science Education
and Training**



Reteaua educationala
Hands-on Science - Romania
Instruire prin experiment



Extra curricular science teaching in schools

Dan Sporea

National Institute for Lasers, Plasma and Radiation Physics


Lasers Metrology and Standardization Laboratory

Center for Science Education and Training

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Home

Presentation

Target groups

Objectives

Outcomes

Members

Subjects

Links

Newsletters

Events

Socrates Database

Project manag



Socrates Comenius Education and Culture

Hands on Science

110157-CP-1-2003-1-PT-COMENIUS-C3

The aim of the Hands-on Science network is to contribute to the generalisation innovation and improvement of Science & Technology teaching at basic vocational training and secondary schools by hands-on experimental practice in the classroom.

Bringing hands-on active learning of Science into the classroom and into the soul and spirit of the European schools.

Next event: International workshop
Science literacy and lifelong learning
Europe towards a knowledge-based society
18th-20th May 2006, Bucharest, Romania





Network of Youth Excellence

The screenshot shows the NYEX website interface. At the top, there is a navigation bar with links: [The idea](#), [Network members](#), [News](#), [Links](#), and [FAQ](#). Below this is a search bar. The main content area is divided into several sections:

- Network Interactions:** Home, Partner-teams, Your opinion, Forum, Mailing lists, Impressum.
- Activities:** Conferences, Camps, Common projects, Model projects, Former projects.
- 3rd NATO-UNESCO ARW:** General information, Aims, Participants, Programme, Proceedings Book, Venue.
- Announcements:** HSCT 2006, International Summer Science Institute, Science literacy and lifelong learning, "Training of Teacher's Trainers in Human Rights Education With Young People".
- Downloads:** Information Brochure.

The **LATEST NEWS** section contains the following articles:

- The Hungarian Research Student Movement turned 10**
September 12, 2006
The Hungarian Research Student Movement, - founding member of the NYEX - celebrates its 10th anniversary with a festive scientific meeting. The Hungarian Academy of Sciences will host the representative event. [more »](#)
- New partner organization joined the Network**
01 Sept., 2006
The Nigerian LIONS-SCT became our first partner in the African continent. The LIONS-SCT is an acronym, which stands for Latest Information On Nature and Science using Information Communication Technologies. The organization is managed by Raphael Adesiyun. [more »](#)
- 3rd NATO-UNESCO ARW new proceedings uploaded**
August 22, 2006
[more »](#)
- The French Research Student Movement has been born**
August 08, 2006
- NYEX welcomes its 18th member**
July 26, 2006
- IJSO 2006**
May 9, 2006
- 3rd International Conference on "Hands-on Science"**
May 5, 2006

Other sections include **Board and Secretariat** (Board, Executive Board, Secretariat), **Partners** (Organizations, Individuals, Sponsors, Candidates), **Join the movement** (How to join?, Application Form, Questionnaire, Memorandum), and **Contact the Network** (House of Professors, H-1146 Budapest Hungary, Alfred Diner sor 19-21, +36-1-222-0517, secretary@nyex.info, facebook@kutadlak.mozgalma.hu).

<http://www.nyex.info/index.html>

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68 members from 33 countries
present science to the people!

EUSCEA European Science Events Association
EUSCEA = "you see", www.euscea.org

European Science Festivals



© EUSCEA, 2008-10-10

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“Science Education and Training in a Knowledge-based Society - SET 2010”

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- Despre CSET
- Parteneriat
- Proiecte
- Lucrari
- Activitati
- Evenimente
- Link-uri utile
- Sponsori



Descarca
Adobe Reader

Descarca
codec DivX

Centrul desfasoara urmatoarele tipuri de activitati:

- Consultanta in domeniul studiului stiintelor prin experiment
- Organizarea de activitati extracurriculare: Science fairs, Science Clubs
- Cursuri pentru profesorii de liceu
- Organizarea de conferinte si seminarii nationale si internationale.
- Cursuri de pregatire profesionala pentru utilizatorii de laseri si echipamente cu laser.

Experiente de laborator asistate de calculator

Educatie in domeniul astronomiei

Educatie in domeniul biologiei

Educatie in domeniul chimiei

Educatie in domeniul istoriei stiintelor

Educatie in domeniul fotonicii

Educatie in domeniul roboticii

Educatie in domeniul dezvoltarii durabile

Educatia in domeniul stiintelor, in scoala generala

Activitati de formare a profesorilor



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*la main
à la pâte*

p·o·l·l·e·n·



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<http://www.inrp.fr/lamap>

<http://www.pollen-europa.net/?page=CLDGDJVwskY%3D>

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Project characteristics

Themes

Multidisciplinary approach

*Means to implement
various activities*

*Intercultural (minorities
involvement)*

*Primary, middle, high
schools*

Financial support

Physics

Chemistry

Natural sciences

Ecology & tourism

Consumer protection

Applied science

Science history

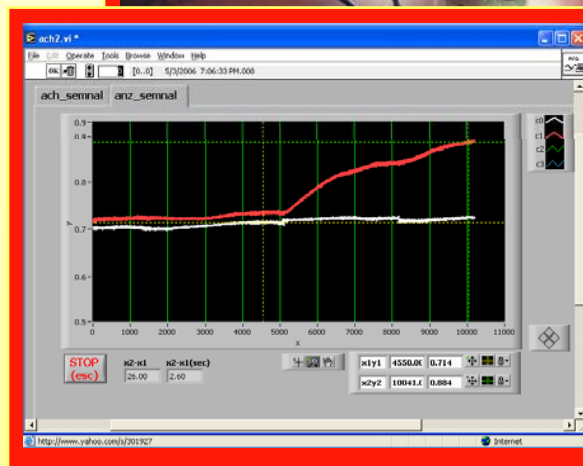
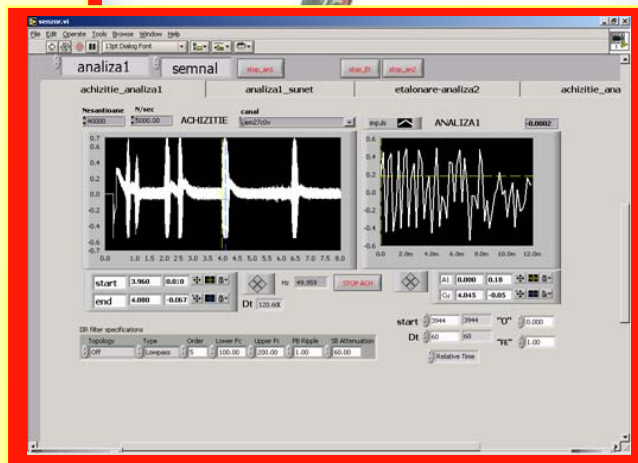
Scientific literacy



Multidisciplinary approach focused on:

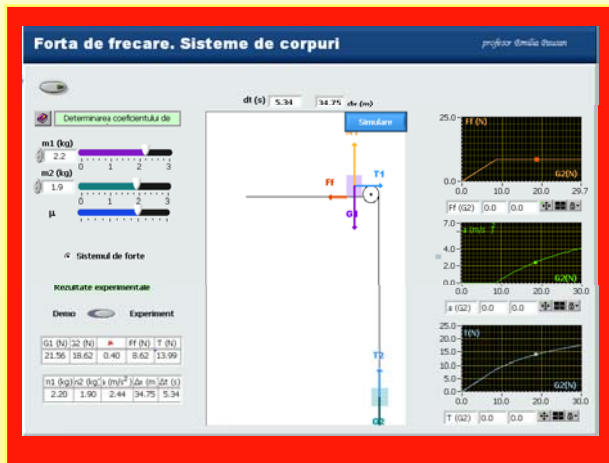
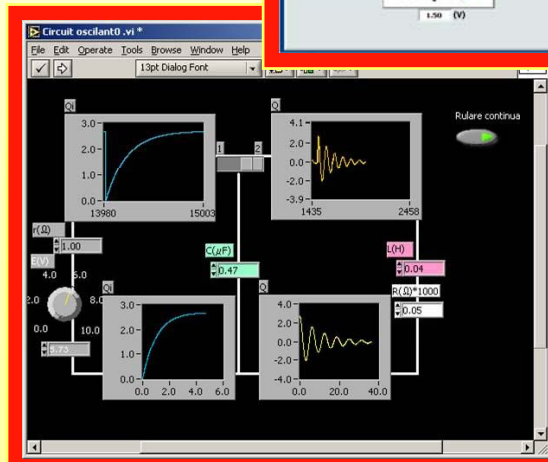
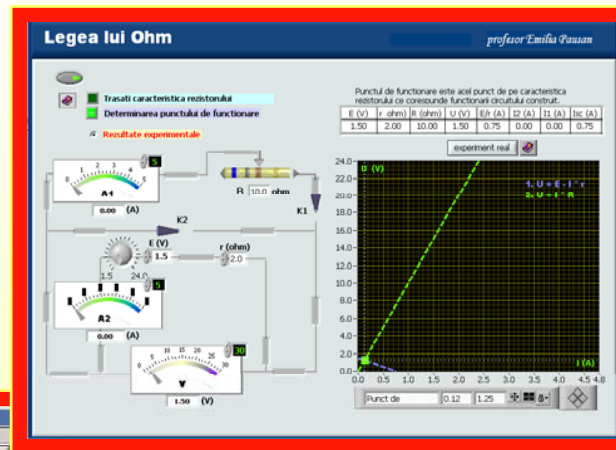
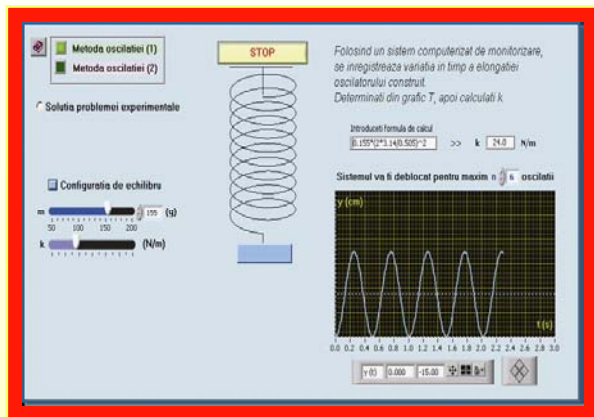
- ***The use of virtual instrumentation (LabVIEW) for real and virtual experiments (data acquisition from various sensors, PC control, European premiere)***
- ***Photonics and optics (optical spectroscopy, optical fiber communications, lasers, classical optics)***
- ***PC graphics (3D design and animation)***
- ***Robotics (LEGO kits)***

Virtual instrumentation - LabVIEW



High school teacher
Mihaela Garabet
Ion Neacsu

Virtual instrumentation - LabVIEW



High school teachers:
Emilia Pausan
Mihaela Garabet
Ion Neacsu



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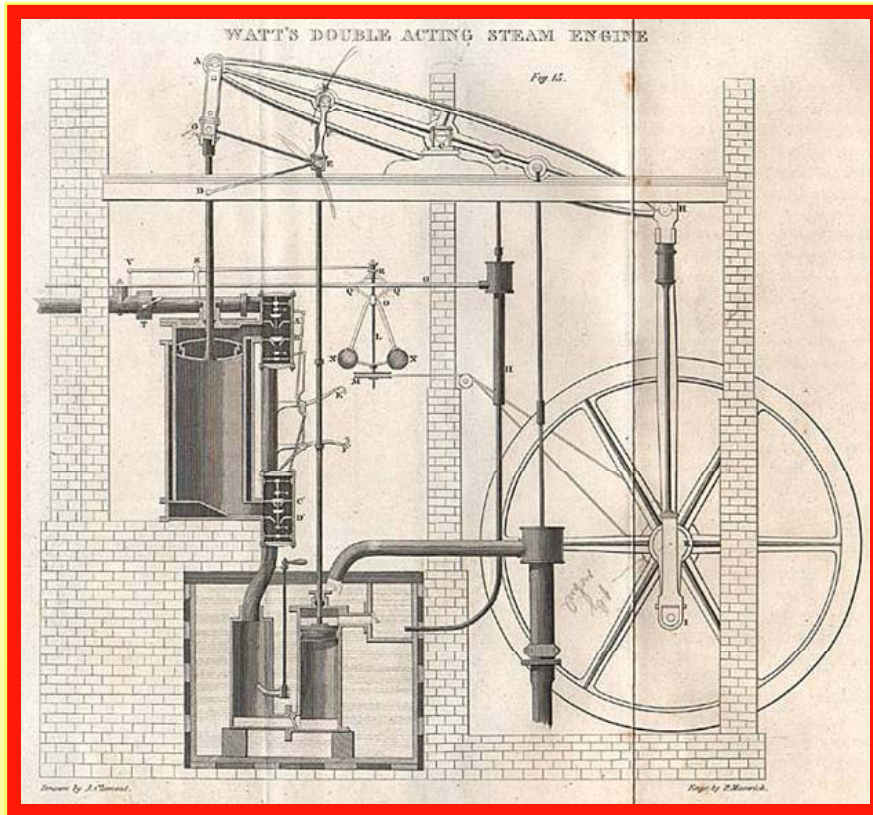
Photonics and optics



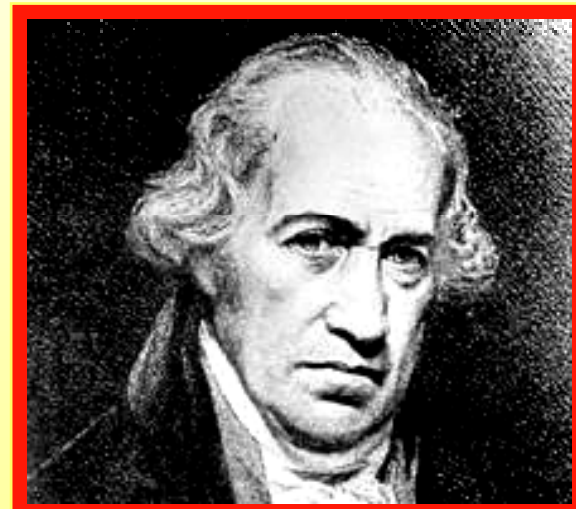
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PC graphics (3D design and animation)

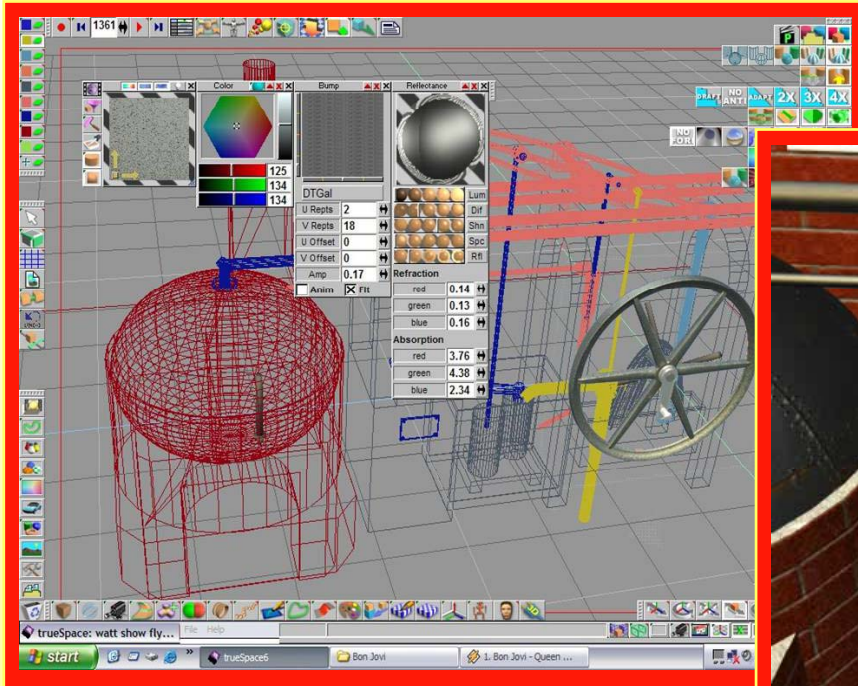


The History of the Steam Engine



James Watt (1736-1819)

PC graphics (3D design and animation)





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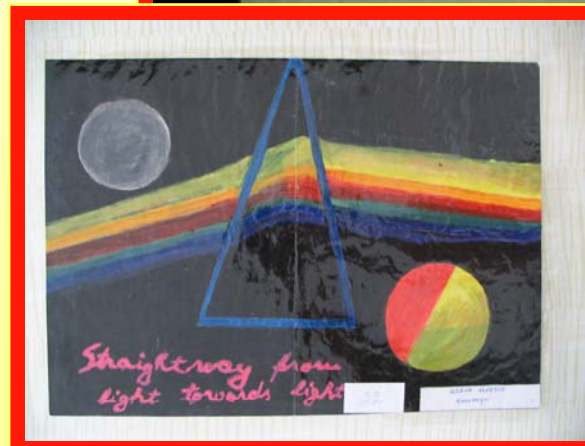
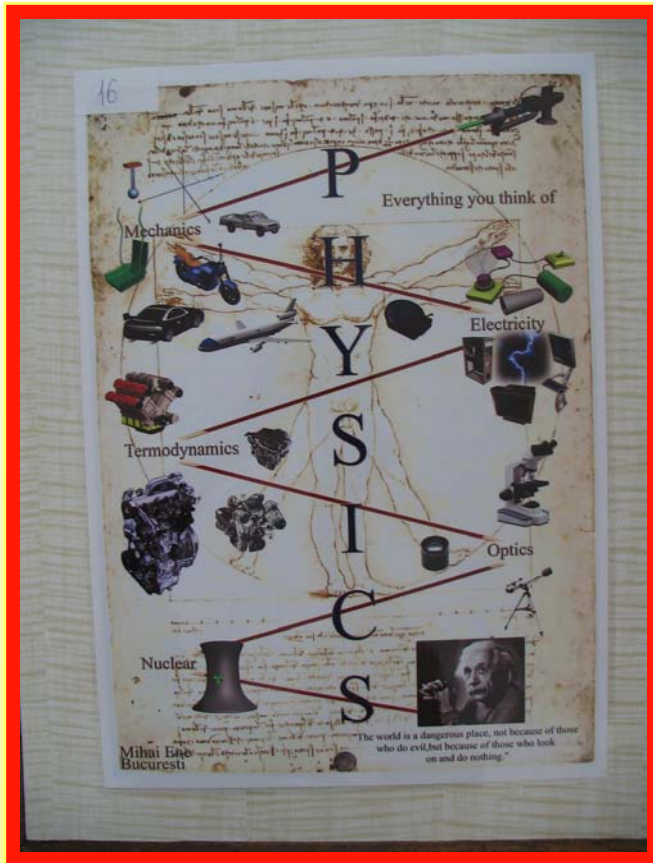
Course for primary school teachers in optics, April 12-13, 2008, in cooperation with National Optical Astronomy Observatory (USA)

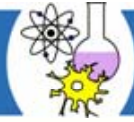


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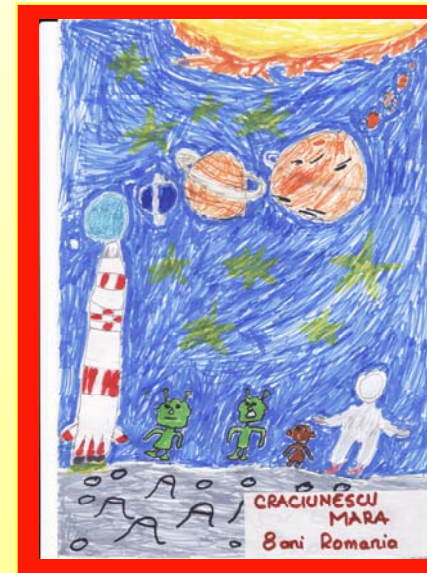
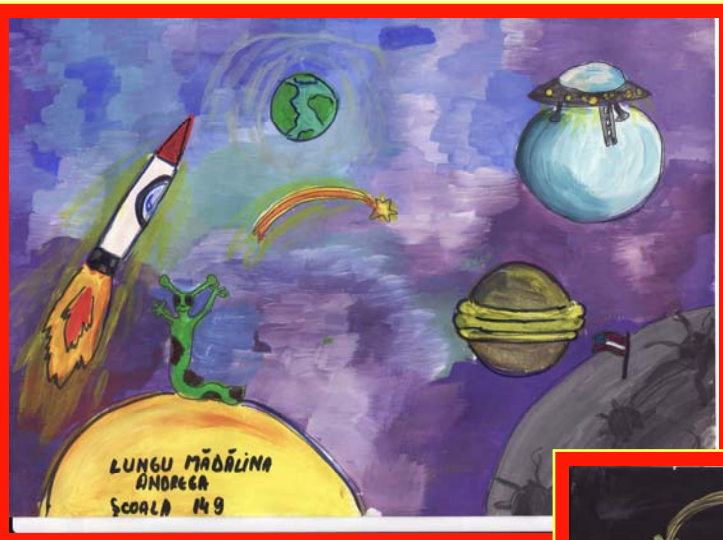
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Science and Arts





Space and Arts, NASA course





Drama



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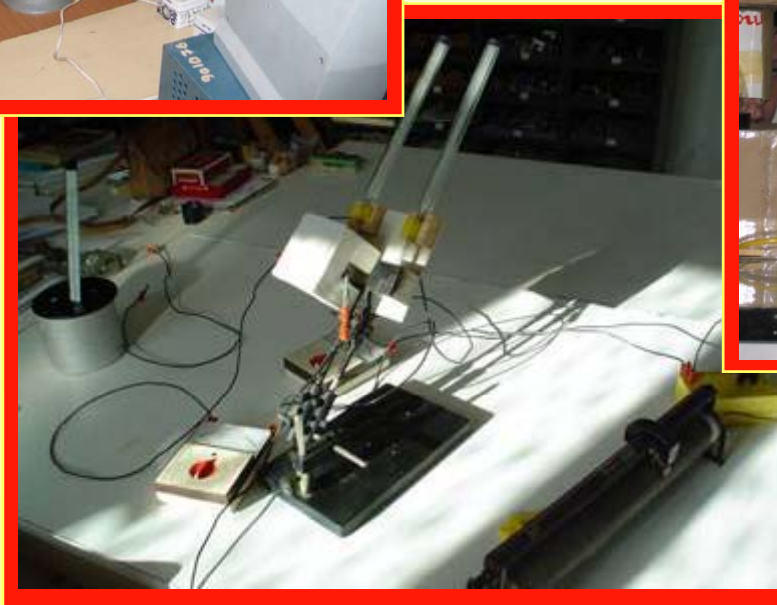
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Music and Poetry



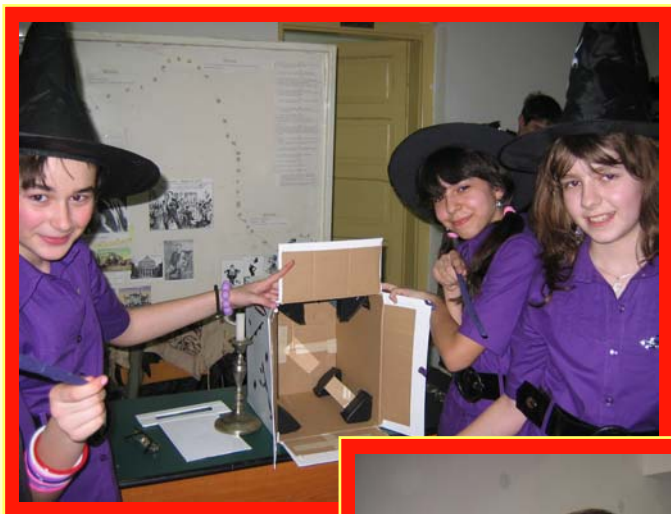


Students contests





Students contests



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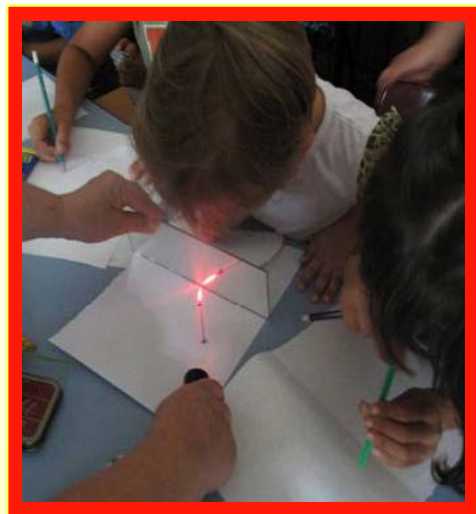


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Light experiments



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Light reflection, refraction, lenses

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Measuring



*Science Summer School at Cool Spring
School teacher Emilia Pausan
School teacher Danusa Dumitrescu
Liceul "T. Vladimirescu" Bucuresti*



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Lectures and workshops



Institutul National pentru Fizica Laserilor, Plasmatii si Radiatii (www.infpx.ro)
"Hands-on Science" Network (www.hos.ro)

**International workshop
Science Literacy and Lifelong Learning:
Europe Towards a
Knowledge-Based Society**
18-20 Mai 2006, Bucuresti, Romania
Hotel "Capitol"

Workshop Chairs: Prof. Manuel Félpe P. C. M. Costa, University of Minho, Portugal
Dan Sporea, INFPLR, Romania

Eventement table:
Targul de idei - Science Fair Hands-on, editia a II-a
organizat in colaborare cu Casa Corpului Didactic - Bucuresti

Sustinate financiare:
Uniunea Europeana prin contractul Comisiei 11057-CP-1-2004-4-PTCOMENUS-CS

Autoritatea Nationala pentru Cercetare Stiintifica
"Science Education and Training in a
Knowledge-Based Society SET 2010",
contract nr. 06/2006

Contact:
Dr. Dan Sporea, INFPLR,
Coordonator national al retelei
"Hands-on Science" si
Directorul proiectului SET 2010,
sporea@infpx.ro, 0740120540

Dr. Clotildea Jianu, INFPLR,
Directorul proiectului SET 2010
Dr. Mihaila Garabet, Bucuresti,
Organizatorul Targului de idei,
mihaila_garabet@yahoo.com

National Institute for Laser, Plasma and Radiation Physics - INFPLR (www.infpx.ro)
"Hands-on Science" Network (www.hos.ro)

**International Workshop
Science Education in School**
October 11-14, 2007, Bucuresti, Romania
Additional information at <http://education.infpx.ro>

Workshop Chairs:
Prof. Manuel Félpe P. C. M. Costa, University of Minho, Portugal
Dan Sporea, INFPLR, Romania

Satellite events:
"Science Fair Hands-on, Science Literacy and Lifelong Learning"
organized in collaboration with Casa Corpului Didactic - Bucharest
and Local Events: "Lingua Mista" - Bucharest
***Training course "Hands-on Science Experiments in Primary Schools"
(<http://www.pollen.europa.net>)

Financial support:
National Authority for Scientific Research
Project: Scientific Education and Training in
a Knowledge-Based Society SET 2010*
contract No. 09/2006

Contact:
Dr. Dan Sporea, INFPLR,
National coordinator for the network
"Hands-on Science - Romania" and
SET 2010 Project Director
dan.sporea@infpx.ro, 0740120540





Exhibitions & Conferences



Le LASER – la lumière miraculeuse

Dr. Clementina Timus
Chercheur Scientifique

Institut National de la Physique des Lasers, Plasma et Radiations
Magurele- Bucarest
B.P. MG-36
Tel/Fax. (4021) 4 57 43 42



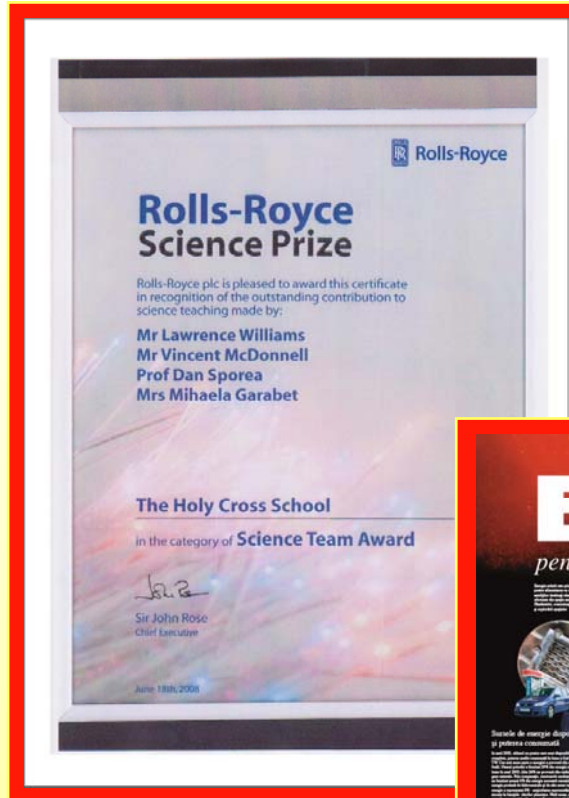
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AVANTES – Holland	
CALIGARI - USA	
Edmund Optics – Germany	
EXFO – Canada	
National Instruments – USA	
Ocean Optics – Holland	
Ontario Centres of Excellence - Canada	
Optical Society of America	
SPIE International Society	
Vernier – USA	



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Thank you !