



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

Proiecte educationale europene cu participarea CSET

**Dan Sporea, Adelina Sporea
Institutul National pentru Fizica Laserilor, Plasmei si Radiatiei**

e-mail: dan.sporea@inflpr.ro



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

The screenshot shows a web browser window with the URL <http://education.inflpr.ro/>. The page features a dark blue background with a large CSET logo on the left and the text "Center for Science Education and Training" on the right. Below this, there is a banner for "Reteaua educationala Hands-on Science - Romania" with the tagline "Instruire prin experiment". The banner includes a small icon of a hand holding a test tube. Below the banner are logos for the European Union and the Romanian Government. At the bottom of the page, there is a copyright notice: "© 2006 CSET - Center for Science Education and Training" and the number "018904". The browser's taskbar at the bottom shows several open applications, including "Workshop CETAL", "CSET - Center for Sci...", "Ppt0000002 [Read-O...", "CSET Projects", and "Radiation monitoring ...". The system clock shows "11:27 AM".

<http://education.inflpr.ro/>

10 aprilie, 2014

Science Education in School 2014 - Galati



measuring across the spectrum

Laser Metrology and Standardization Laboratory



Center for Science Education and Training

The screenshot shows the website education.inflpr.ro/ro/home.htm in an Opera browser. The page features a navigation menu on the left and a main content area with project listings. The first listing is for the 'i-best' project in Romania (2012-2015). The second listing is for 'Creative Little Scientists' in Belgium, Finland, France, Germany, Greece, Malta, the UK, Portugal, and Romania (2011-2014).

Project Name	Location	Duration
Proiectul "Inquiry-Based Education in Science and Technology - I-BEST"	Romania	2012-2015
Micii cercetatori creativi: Dezvoltarea creativitatii prin predarea stiintelor si matematicii in invatamantul prescolar si primar	Belgia, Finlanda, Franta, Germania, Grecia, Malta, Marea Britanie, Portugalia, Romania	2011-2014

10 aprilie, 2014

Science Education in School 2014 - Galati



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

Micii cercetatori creativi: Dezvoltarea creativitatii prin predarea stiintelor si matematicii în învățământul prescolar si primar



<http://education.inflpr.ro/ro/MiciiCercetatoriCreativi.htm>



The project CREATIVE LITTLE SCIENTISTS has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) for research, technological development and demonstration under grant agreement no 289081.

10 aprilie, 2014

Science Education in School 2014 - Galati



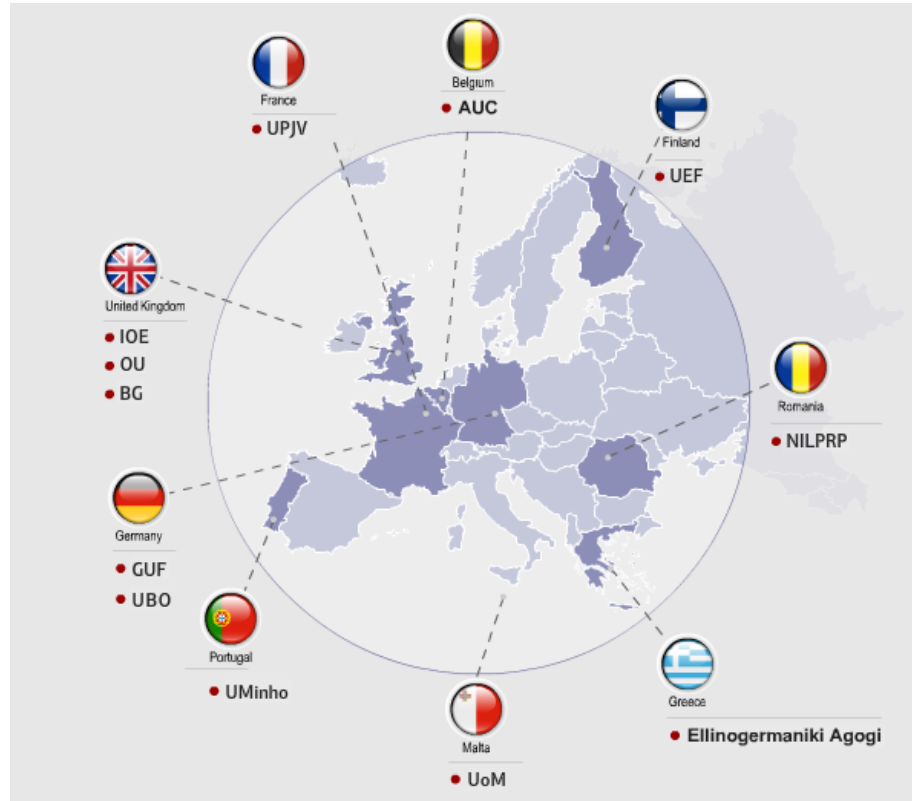
measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



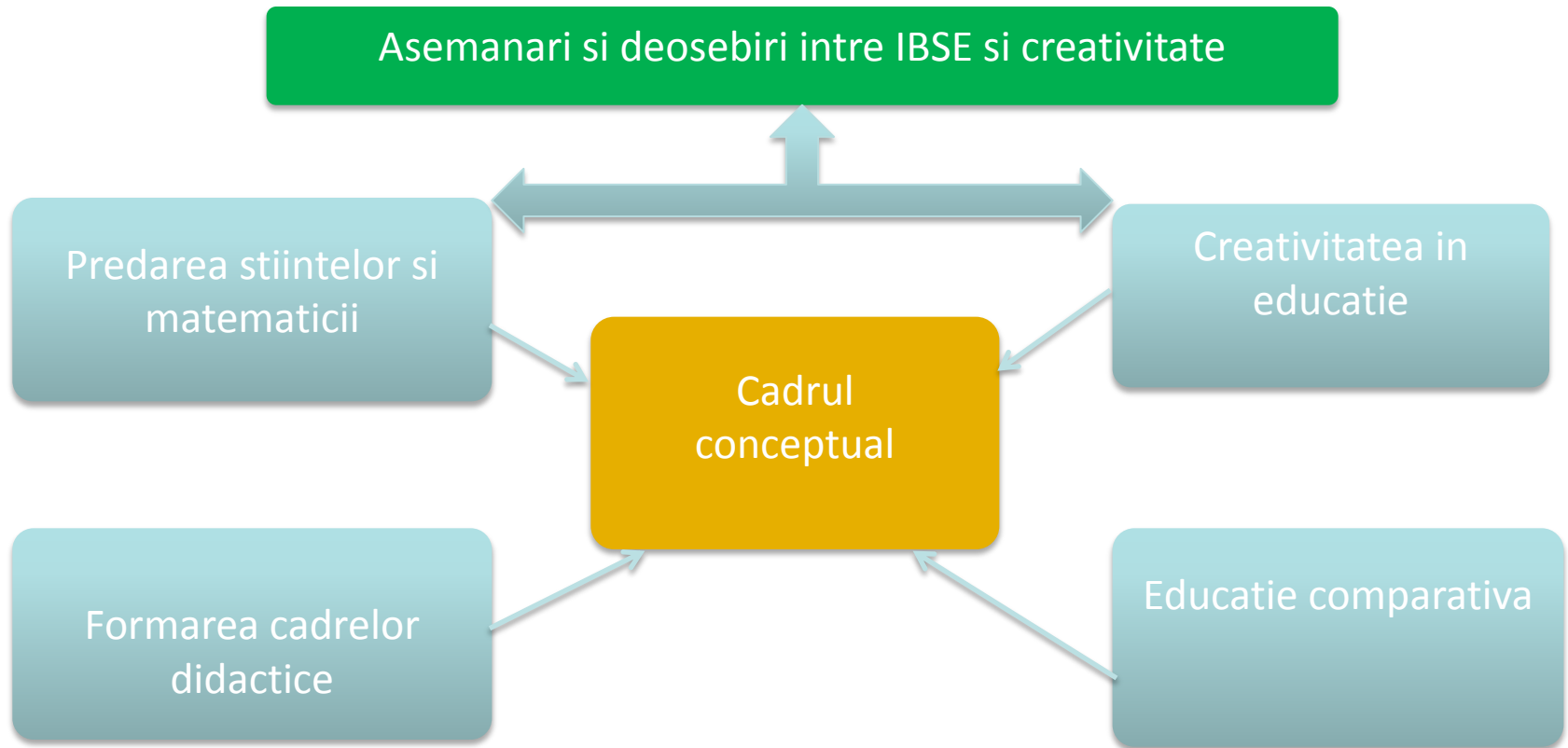
**Center for
Science Education
and Training**

Parteneri



10 aprilie, 2014

Science Education in School 2014 - Galati



Preluat din: Fani Stylianidou si Dimitris Rossis "Enabling Creativity and Inquiry through Science and Mathematics in Early Years Education"

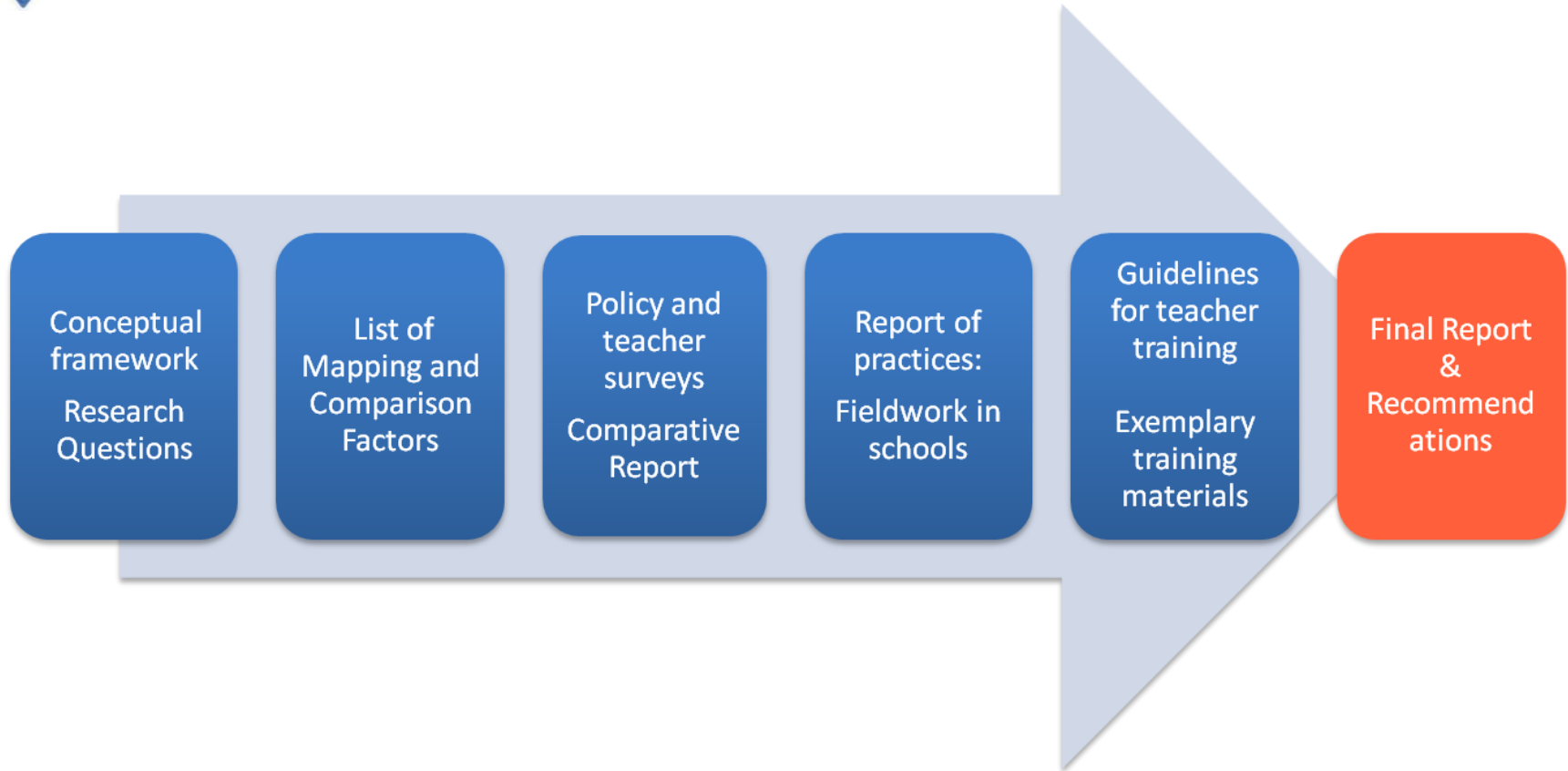


measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**



Preluat din: Fani Stylianidou si Dimitris Rossis “Enabling Creativity and Inquiry through Science and Mathematics in Early Years Education”

10 aprilie, 2014

Science Education in School 2014 - Galati



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

Rezultate:

- Ghid orientativ pentru cercetarea bibliografica
- Setul de principii care sta la baza cercetarilor
- Studiu cu privire la predarea stiintelor si matematicii la nivel prescolar si in primii ani ai invatamantului primar
- Creativitatea in educatie
- Studiu privind formarea cadrelor didactice pentru invatamantul prescolar si primar in domeniul matematicii si al stiintelor
- Studiu comparativ privind predarea stiintelor si matematicii
- Lista factorilor utilizati pentru mapare și comparare
- Raport privind practicile identificate
- Raport despre sondajul de opinie privind practica didactica
- Raportul privind desfasurarea activitatilor de cercetare in unitatile de invatamant
- Linii directoare si principii de proiectare curiculara pentru formarea cadrelor didactice, exemple
- Raport final si recomandari



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**



Shaping the future of STEM education

Innovation Networks in Science, Technology, Engineering & Mathematics

<http://instem.tibs.at/>

supported by:



Education and Culture DG

Lifelong Learning Programme

10 aprilie, 2014

Science Education in School 2014 - Galati



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

Parteneri

- **Pädagogische Hochschule Freiburg (DE)**
- **Norges teknisk-naturvitenskapelige universitet (NO)**
- **University of Innsbruck (AT)**
- **Martin-Luther-Universität Halle-Wittenberg (DE)**
- **The University of Liverpool (UK)**
- **University of Naples Federico II (IT)**
- **Dublin City University (IR)**
- **University of Exeter (UK)**
- **Hacettepe University (TR)**
- **National Institute for Laser, Plasma and Radiation Physics, CSET (RO)**
- **FORTH (GR)**
- **Bodmin College (UK)**
- **Walther-Rathenau-Gewerbeschule (DE)**
- **Ellinogermaniki Agogi (GR)**



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

INSTEM va:

- **dezvolta initial rapoarte de sinteza accesibile și informari,**
- **furniza actualizari periodice cu privire la progresele inregistrate in educatia tip STEM, bazate pe informatii la zi primite de la cercetatori, practicieni și factorii de decizie in domeniu.**

Se va merge dincolo de activitățile anterioare "de depozite de informatii", prin:

- **o abordare critica, reflexiva si inclusivă a diferitelor componente ale practicii pedagogice**
- **munca de dezvoltare de module educationale desfasurata in cadrul proiectelor europene.**



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

Rezultate:

- Conferinta internationala a coordonatorilor de proiecte europene
- Raport referitor la stadiul actuala in domeniul educatiei tip STEM
- Raport de sinteza privind desfasurarea proiectelor europene FP7 si LLL
- Seminarii natinale de analiza a rezultatelor proiectelor
- Raport asupra seminariilor nationale
- Conferinta internationala a beneficiarilor proiectelor europene



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**



Supporting Science Teaching Advancement through Inquiry

<http://www.sustain-europe.eu/>



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

Parteneri

- **FONDATION LA MAIN A LA PATE – FRANCE (FR)**
- **ECOLE NATIONALE SUPERIEURE DES TECHNIQUES
INDUSTRIELLES ET DES MINES DE NANTES (FR)**
- **FREE UNIVERSITY OF BERLIN (DE)**
- **ST PATRICK'S COLLEGE (IR)**
- **NATIONAL ASSOCIATION OF NATURAL SCIENCE TEACHERS (IT)**
- **NATIONAL INSTITUTE FOR LASERS PLASMA AND RADIATION (RO)**
- **VINČA INSTITUTE OF NUCLEAR SCIENCES (RS)**
- **TRNAVA UNIVERSITY (SK)**
- **UNIVERSITY OF LJUBLJANA (SL)**
- **UNIVERSITY OF LEICESTER (UK)**
- **SCIENCE LEARNING CENTRE, UNIVERSITY OF EDUCATION (AT)**



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**

Parcursul a 3 ani, rețeaua SUSTAIN, formată din 11 furnizori de CPD din 10 țări ale UE, cu o vastă experiență în IBSE, va dezvolta, prin colaborare pe 3 module tip ESD (Education for Sustainable Development) transversale, o bază de IBSE referitoare la inovarea în domeniu, un "set de instrumente" pentru profesori și formatori, care pot fi utilizate și adaptate la contextele locale, în majoritatea țărilor europene.

Partenerii din proiect vor forma trei grupuri de lucru, pe trei teme majore ESD, și vor dezvolta module tip IBSE și instrumente de formare, precum și activități, care vor fi prezentate în trei ateliere de lucru europene, și apoi vor fi puse la dispoziția utilizatorilor pentru exploatare sub formă a 3 manuale publicate pe site-ul proiectului.

Totul este construit pe "trei piloni", ca un model de care se leagă aspectele de mediu, sociale și economice, toate fiind interdependente.



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**



Intrebari ??



measuring across the spectrum

**Laser Metrology and
Standardization Laboratory**



**Center for
Science Education
and Training**



10 aprilie, 2014

Science Education in School 2014 - Galati