



European Institute of  
Innovation & Technology

## 4th Workshop

# Raw Matters Ambassadors @ Schools

July 4 and 5, 2016

**School of Mining and Energy Engineering  
and Foundation Gomez Pardo**



Visiting address:  
Rios Rosas Street nº 21  
28003 Madrid  
Spain

## Raw Matters Ambassadors @ Schools AGENDA

**July 4, 2016**

### **Fourth RM@Schools Workshop**

**Monday July 4, 2016** - Focus on the RM@Schools Learning Pathways

- ✓ **13:00h** Participants registration
- ✓ **13:30h** Welcome
- ✓ **13:45h** **1<sup>RST</sup> STEERING COMMITTEE MEETING - Status of the RM@Schools project - Armida Torreggiani - CNR –ASTER (IT)**
- ✓ **14:15h** **How to introduce RM-related themes to students – Eric Pirard - University of Liege (BE)- remote presentation**
- ✓ **14:45h** **LEARNING PATHWAYS:** Discussion on how to present the learning pathway and understanding of the *hands-on* experiment protocols

#### **GEOLOGY & MINING**

- *Liliana Medic* - Universidad Politécnica de Madrid – ES: (1) **Geology games:** Mineral and Rock Identification and techniques used in mineral and rock recognition ; Rocks on my face; Rocks in my body; (2) **From minerals' discovery to returning to the land in the natural state:** Mineral Prospecting, Development, Mining Operations, Closure of Mines; Gold Panning Activity
- *Martine VanHerck* - University of Liege – BE : **Metallurgy of copper**
- *Christian F.Otto* - Technische Universitet Clausthal– DE : **Metal Separation** (a) Precipitation and leaching; (b) Separation of Cu<sup>2+</sup> and Fe<sup>3+</sup> by an ion exchanger;
- ✓ **16:00h** Coffee break
- ✓ **16:30h** ENERGY SUPPLY & SUBSTITUTION
  - *Marco de Graaff* - Stichting Wetsus – NL : **Blue Energy Stack**
  - *Christian F.Otto* - Technische Universitet Clausthal– DE : **(1) Cation Trap; (2) Miscellaneous Hands-on Experiments on fluorescence, high magnetic flux density and memory alloy Metals**
- ✓ **17:30h** CIRCULAR ECONOMY
  - *Marco de Graaff* - Stichting Wetsus – NL : **P- Recovery - Struvite from urine**
- ✓ **18:00h** Closing
- ✓ **21:00h** Dinner

**Tuesday July 5, 2016**

- ✓ **9:00h**     **RECYCLING**
  - **Cation exchanger** - *Christian F Otto - TU-Claustal*
  - **Deinking** - *Christian F Otto - TU-Claustal – DE*
  - **Metal Separation: examples of fish hooks in recycling strategies** - *Christian F Otto - TU-Claustal – DE (30 min)*
  - **Dismantling of mobile phone** - *Martine VanHerck - University of Liege – BE*
  - **Recycling of Aluminium**- *Martine VanHerck- University of Liege – BE (20 min)*
  - **RM in HDD: Identify rare earths within a Hard Disk Drive (HDD)**- How to create Educational Cards - *Cristiano Albonetti – CNR – ASTER (20 min)*
  
- ✓ **10:10h**     **Coffee break**
  
- ✓ **10:40h**     **RM@School virtual centre & Web site** - *Alessandra Degli Esposti – CNR – ASTER (20 min)*
  
- ✓ **12:10h**     **Working plan: Discussion on the state of art of the project**
  - Presentation of the RM@Schools project to schools (i.e. leaflet) -*Patricia Groo'-Nagy - Bay Zoltan Hu*
  - preparation of teaching supporting materials, creation of the Local Network (i.e. involvement of Companies), etc.
  
- ✓ **12:40h**     Visit in School of Mining and Energy Engineering (Museums, Historical Library, Underground Mine, etc...)
  
- ✓ **14:00h**     Lunch/Closing

## **GENERAL INFORMATION**

### *Organizing Committee*

*Benjamin Calvo, Liliana Medic, Armida Torreggiani*

### *Contacts*

*Liliana Medic* liliana.medic@upm.es **Office** +34 33670 57 **Mobile** +34 660 88 97 00

*Armida Torreggiani* armida.torreggiani@isof.cnr.it; **Office** +390516399821 **Mobile** +39347463261

### *Suggested Accommodation:*

Student Residence next to School or Hotels

*Meeting Venue: ALENZA Street n° 1; Foundation Gomez Pardo Building (meeting room VIII)*

*How to reach us: Metro station: Rios Rosas Blue Line 1*



Please follow this link

