

# hsci2015

Funchal, Madeira Island

Portugal

27 - 30 July



**FÁBRICA**  
CENTRO CIÊNCIA VIVA  
aveiro



Escola Secundária de  
**Francisco Franco**



AGÊNCIA NACIONAL  
PARA A CULTURA  
CIENTÍFICA E TECNOLÓGICA



# hsci2015

Funchal, Madeira Island, Portugal

program

Hour	26 July	27 July	28 July	29 July	30 July
09:00-09:40		Registration	Registration	Registration	Registration
9:40-10:20		Opening session Room A	Plenary lecture 3 Room A	Plenary lecture 5 Room A	Oral Communications Room A
10:20-11:00		Plenary lecture 1 Room A	Plenary lecture 4 Room A	Plenary lecture 6 Room A	
11:00-11:30		Coffee-break	Coffee-break	Coffee-break	Coffee-break
11:30-12:30		Oral Communications Room A	Oral Communications parallel sessions Rooms A and B	Workshops Rooms 301 - 305	Oral Communications parallel sessions Rooms A and B
12:30-13:00		Poster session	Poster session	Poster session	Closing session Room A
13:00-14:30		Lunch	Lunch	Lunch	Lunch
14:30-15:30		Oral Communications parallel sessions Rooms A and B	Discussion groups Rooms A and B	Science Fair & Poster Session	Social Program
15:30-16:10				Scientific Performances & Demonstrations	
16:10-16:40		Plenary lecture 2 Room A			
16:40-17:00		Coffee-break		Coffee-break	
17:00-17:30	Registration		Social Program	Scientific Performances & Demonstrations	
17:30-18:00					
18:00-18:30		Social Program			
18:30-19:00					
19:00-19:30	Welcome reception				
19:30-20:30				Conference dinner	
20:30-22:30					

detailed program

## SUNDAY, 26TH JULY

17:00 - 18:30 | **Registration** . University of Madeira Rectorate's Building

18:30 - 20:30 | **Welcome reception** . City Hall of Funchal

Demonstration:

### **MOLECULAR GASTRONOMY: PUSHING THE BOUNDARIES OF COOKING THROUGH SCIENCE**

Carla S. Alves, Carla Miguel, Dina Maciel, Nilsa Oliveira, Helena Tomás, João Rodrigues (University of Madeira)

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## MONDAY, 27TH JULY

09:00 - 09:40 | **Registration**

09:40 - 10:20 | **Opening session** – Room A

10:20 - 11:00 | **Plenary lecture I** – Room A

Chair: Manuel F. M. Costa, University of Minho, Portugal

### **LIGHT AND SHADOWS OF HANDS-ON BASED EDUCATION**

Alexander Kazachkov (V.Karazin Kharkiv National University, Ukraine)

11:00-11:30 | **Coffee-break**

11:30-12:30 | **Oral Communications** – Room A

Chair: Sónia Seixas, Open University, Lisbon, Portugal

### **POTENTIAL OF SCIENCE CLUB NETWORKS FOR SCIENCE & TECHNOLOGY POPULARIZATION AND COMMUNICATION**

Brinder Kumar Tyagi (Vigyan Prasar, India)

### **THE BUILD-UP OF A NATIONAL COMMUNITY OF PRACTICE IN SCIENCE TEACHING**

Adelina Sporea (National Institute for Laser, Plasma and Radiation Physics, Romania)

### **MODELING THE NEURON!**

Carla Maria Medeiros y Araujo (University of Brasilia, Brazil)

detailed program

**MONDAY, 27th JULY**

12:30 - 13:00 | **Poster session**

13:00 - 14:30 | **Lunch break**

14:30 - 16:10 | **Oral Communications** – Parallel Sessions

• **Room A**

Chair: Fernanda Gouveia, University of Madeira, Portugal

**IMPACT OF COASTAL EROSION IN PORTUGAL:**

**SCIENCE FACTS IN A TELEVISION DOCUMENTARY**

Sofia Barata (Universidade de Aveiro, Portugal)

**EDUCATIONAL PROJECT FOR THE STAR EXPERIMENT AT RHIC**

Victoria Belaga (Joint Institute for Nuclear Research, Russian Federation)

**SCIENCE PROMOTION AMONG HIGH SCHOOL STUDENTS**

**THROUGH PHD STUDENT CHAPTERS**

Carlos Doñate Buendía (Universitat Jaume I, Spain)

**"THERE IS SCIENCE HERE!"- AN INNOVATIVE PROGRAMME**

**FOR KINDERGARTEN AND PRIMARY SCHOOLS**

Alexandra Catarina Cardoso Júlio (Instituto Gulbenkian de Ciência, Portugal)

**DEVELOPMENT OF CHILDREN'S ATTITUDES AND KNOWLEDGE**

**TOWARDS INSECTS: THE PEDAGOGICAL ROLE OF SCHOOL**

**VISITS TO EXHIBITIONS**

Dora Aguin Pombo (Universidade da Madeira, Portugal)

• **Room B**

Chair: Paulo Brazão, University of Madeira, Portugal

**EURO4SCIENCE: EXPLORING FORENSIC SCIENCE POPULARITY**

**TO PROMOTE YOUNG PEOPLE'S INTEREST IN SCIENCE AND TECHNOLOGY**

Luis Manuel Souto de Miranda (Universidade de Aveiro, Portugal)

**STUDENT ATTITUDES TOWARD SCIENCE AND TECHNOLOGY IN PUBLIC**

**EDUCATION OF CHILE. APPROACH TO DIAGNOSIS OF SITUATION**

Ximena Vildósola Tibaud (Universidad Metropolitana de Ciencias de la Educación, Chile)

detailed program

**MONDAY, 27th JULY**

**THE QUALITY OF STUDENT-CONSTRUCTED SCIENTIFIC EXPLANATIONS:**

**A STUDY WITH 8TH GRADE STUDENTS**

Vanessa Figueiredo Pereira de Andrade (Instituto de Educação  
da Universidade de Lisboa, Portugal)

**THE PERCEPTION OF THE POPULATION THAT CAPTURES MUSSELS  
AND BARNACLES IN EASTER ON MEASURES OF ECOSYSTEM CONSERVATION**

Sónia Isabel Fernandes Borges Pena Seixas (Universidade Aberta, Portugal)

**CIÊNCIA P'RA QUE TE QUERO: MAKING SCIENCE ACCESSIBLE  
AND EXCITING TO YOUNG PEOPLE**

Joana Patrícia Veríssimo Ferreira (Universidade do Minho, Portugal)

Joana Maria Rolim Farinha Marques (Universidade do Minho, Portugal)

16:10 - 16:40 | **Plenary lecture II** – Room A

Chair: Helena Tomás, University of Madeira, Portugal

**DESIGNING LEARNING SCENARIOS WITH ROBOTS FOR HANDS-ON  
MATHEMATICS AND INFORMATICS LEARNING**

Elsa Fernandes (University of Madeira, Portugal)

16:40 - 17:30 | **Coffee-break**

17:30 - 19:30 | **Social Program**

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**TUESDAY, 28TH JULY**

09:40 - 11:00 | **Plenary lecture III and IV** – Room A

Chair: Manuel F. M. Costa, University of Minho, Portugal

**CHILD'S PLAY OR A CHILD'S CRUCIAL WORK? THE IMPORTANCE  
OF PLAY IN THE LEARNING OF SCIENCE**

Sue Dale Tunnicliffe (UCL IOE, United Kingdom)

detailed program

**TUESDAY, 28th JULY**

**WHY-, WAYS-, WHOM-, WHEN- WHAT- AND WHO- TO TEACH  
IN SCIENCE AND TECHNOLOGY**

Panagiotis Michailidis (The University of Crete, Greece)

11:00 - 11:30 | **Coffee-break**

11:30 - 12:30 | **Oral Communications – Parallel Sessions**

• **Room A**

Chair: Sue Dale Tunnicliffe, University College London, United kingdom

**DISCOVERING LIGHT. THE 5TH SCIENCE FAIR HANDS-ON SCIENCE**

Manuel Filipe P C M Costa (Universidade do Minho, Portugal)

**HARDWARE-SOFTWARE COMPLEX “VIRTUAL LABORATORY OF NUCLEAR  
FISSION” – INTEGRATION OF VIRTUALITY, MODERN EQUIPMENT  
AND REAL EXPERIMENTAL DATA**

Victoria Belaga (Joint Institute for Nuclear Research, Russian Federation)

**COLOR, LIGHT AND MATTER - THE SIMPLICITY OF METAL ION COMPLEXES**

Isabel Maria Boal-Palheiros (Universidade de Aveiro, Portugal)

**A STUDY ON TEACHERS' PERCEPTION ABOUT EDUCATIONAL TECHNOLOGY**

Can Serdar (Adana il Milli Egitim Müdürlüğü, Turkey)

• **Room B**

Chair: Panagiotis Michailidis, University of Crete, Greece

**TEACHING THE ELUSIVE CONCEPT OF A PHOTON**

Angela M. Guzmán (CREOL, the College of Optics and Photonics,  
University of Central Florida)

**SYNTAX AND BIOLOGY A TEACHING EXPERIENCE  
WITH THE LABORATORY NOTEBOOK**

Maria Helena Dias Rebelo (Universidade da Madeira, Portugal)

**ASSESSING THE IMPACT OF SCIENTIFIC GARDENS AND WORKSHOP ACTIVITIES  
ON STUDENT PERCEPTION AND AWARENESS OF PLANT SPECIES: AN INNOVATIVE  
AND PROACTIVE PROJECT FOR 8TH GRADE STUDENTS**

Maria Manuel Azevedo (Escola D. Maria II, V.N. Famalicão, Portugal)

detailed program

**TUESDAY, 28th JULY**

**STRUCTURING STUDENTS ENGAGEMENT IN INQUIRY-BASED LEARNING;  
THE PROCESS IS THE PRODUCT**

Angel Suarez Fernandez (Open Universeit, Netherlands)

12:30 - 13:00 | **Poster session**

13:00 - 14:30 | **Lunch break**

14:30 - 15:30 | **Discussion Groups – Parallel Sessions**

• **Room A**

**EFFICIENCY OF INQUIRY-BASED EDUCATION:  
GUIDED RESEARCH VS. 'BLIND' BRAINSTORMING**

Alexander Kazachkov (V.Karazin Kharkiv National University, Ukraine)

• **Room B**

**DIGITIZING THE CLASSROOM: TABLET COMPUTERS IN SCIENCE EDUCATION**

Daniela Schwarz, Amitabh Banerji (University of Cologne, Germany)

15:30 - 19:30 | **Social Program**

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## **WEDNESDAY, 29TH JULY**

9:40 - 11:00 | **Plenary Lecture V and VI – Room A**

Chair: Alexander Kazachkov, V.Karazin Kharkiv National University, Ukraine

**HANDS-ON EXPERIMENTS IN THE FORMATION  
OF SCIENCE CONCEPTS IN PRE-SCHOOL**

Josef Trna (Masaryk University, Czech Republic)

**REDESIGNING CIRCUITS FOR THE ALOP WORKSHOP IN LATIN AMERICA**

Angela Maria Guzman Hernandez (CREOL, College of Optics and Photonics,  
University of Central Florida, USA)

11:00 - 11:30 | **Coffee-break**

detailed program

**WEDNESDAY, 29th JULY**

11:30 - 12:30 | **Workshops – parallel sessions**

• **Room 301**

**BODY LANGUAGE TO UNDERSTAND RELATIVITY**

Xabier Prado Orbán (IES Pedra da Auga Secondary school, Spain)

• **Room 302**

**A WORKSHOP ON HOW TO CREATE SCIENTOONS AND MAKING  
SCIENCE LEARNING A JOYFUL EXPERIENCE**

Pradeep Kumar Srivastava (Central Drug Research Institute, India)

• **Room 303**

**THINGS TO TAKE FROM THE SEA BEACH TO THE EDUCATIONAL CENTER**

Roman Grynyov (Ariel University Center of Samaria), Alexander Kazachkov  
(V.Karazin Kharkiv National University, Ukraine)

• **Room 304**

**SCIENCE MOTIVATION**

Jorge Carmo António (Agrupamento de Escolas do Bonfim – Portalegre, Portugal)

• **Room 305**

**BIOMASS BATTERY**

Mohamad Firdaus Bin Nawawi (National Science Center, Malaysia)

12:30 - 13:00 | **Poster session**

13:00 - 14:30 | **Lunch break**

14:30 - 15:30 | **Science Fair and Poster Session**

15:30 - 16:30 | **Scientific performances and Demonstrations – Room A**

**WHERE SCIENCE MEETS ORAL NARRATIVE**

Marta Condesso (Fábrica Science Center – University of Aveiro)

**BRIGHTENING THE CLASSROOM: HANDS-ON**

**ORGANIC LEDS AND SOLAR CELLS**

Jennifer Dörschelln, Amitabh Banerji (University of Cologne – Germany)



detailed program

**WEDNESDAY, 29th JULY**

16:30 - 17:00 | **Coffee-break**

17:00 - 18:30 | **Scientific performances and Demonstrations** – Room A

**ARS LUX LASER HARP – THE MUSICALITY OF LIGHT**

Rita Gabriela Monteiro da Rocha (Colégio Luso-Francês, Portugal)

**ARDUINO SCIENCE KIT: OPEN HARDWARE**

**PLATFORM FOR SCIENCE ACTIVITIES**

Paulo Ferreira (Escola Secundária de Santa Comba Dão),

Jorge Loureiro (Instituto Politécnico de Viseu)

**THE EURO4SCIENCE FORENSIC SCIENCE EDUCATION**

**TOOLBOX – DEMONSTRATION OF BETA VERSION**

Luís Souto, Helena Moreira, Filipa Tavares,

Rosa Pinho (Department of Biology, University of Aveiro)

**EVALUATION AND COMPARISON OF ROBOTIC, MECHANIC**

**AND PROGRAMMING SKILLS AMONG 9 TO 14 YEARS OLD CHILDREN**

**WITH AND WITHOUT LEGO EDUCATION**

Hakan Guvez (The Institute of Social Sciences – Turkey)

19:00 - 22:30 | **Conference Dinner**

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## **THURSDAY, 30TH JULY**

9:40 - 11:00 | **Oral Communications** – Room A

Chair: Elsa Fernandes, University of Madeira, Portugal

**ACCESS TO SCIENCE AND TECHNOLOGY BY WOMEN IN INDIA**

Kinkini Dasgupta Misra (Vigyan Prasar, India)

**NEW LIGHT TO RELATIVITY WITH LEVERS AND STICKS**

Xabier Prado Orbán (IES Pedra da Auga Secondary school, Spain)

detailed program

**THURSDAY, 30th JULY**

**SCIENCE OUTREACH ACTIVITIES AT CQM-CENTRO DE QUÍMICA DA MADEIRA**

Helena Maria Pires Gaspar Tomás (University of Madeira, Portugal)

**BEFORE VERSUS AFTER: "WORD CLOUDS" AS A TOOL TO IDENTIFY ADEQUATE KEY-WORDS DESCRIBING AN EXPERIMENTAL ACTIVITY IN A CHEMISTRY LABORATORY CONTEXT**

Teresa Margarida dos Santos (University of Aveiro, Portugal)

**SCIENTOONS AND NANOTECHNOLOGY: A SCIENCE OF SMALL THINGS FOR A BIG CHANGE**

Pradeep Kumar Srivastava (Central Drug Research Institute, India)

11:00 - 11:30 | **Coffee-break**

11:30 - 12:30 | **Oral Communications – Parallel Sessions**

• **Room A**

Chair: Josef Trna, Masaryk University, Czech Republic

**HANDS-ON EXPERIMENTS AND CREATIVITY**

Eva Trnova (Masaryk University, Czech Republic)

**LEARNING TO BE CRITICAL WITH MATHEMATICS: BODY MASS INDEX**

Sónia José Teixeira Faria de Abreu

(Escola Básica dos 2.º e 3.º Ciclos Dr. Eduardo Brazão de Castro, Portugal)

**HANDS-ON MATHEMATICS WITH LEGO ROBOTS**

Sónia Matilde Pinto Correia Martins

(Middle and Secondary School Ângelo Augusto da Silva, Portugal)

**ROBOTS TO LEARN STATISTICS AND CITIZENSHIP**

Paula Cristina Reis Lopes

(Escola Básica e Secundária Dr. Ângelo Augusto da Silva, Portugal)

detailed program

**THURSDAY, 30th JULY**

• **Room B**

Chair: Brinder Kumar Tyagi, Department of Science & Technology, Vigyan Prasar, India

**HANDS ON ACTION RESEARCH IN CONSTRUCTION OF THE TEACHING PROFESSION: A SCIENTIFIC CONTRIBUTION IN THE INITIAL TEACHER TRAINING OF THE UNIVERSITY OF MADEIRA (UMA)**

Maria Fernanda Baptista Pestana Gouveia (Universidade da Madeira, Portugal)

**MATHEMATICS HIGHER EDUCATION WITH INTERACTIVE COMPUTING RESOURCES**

Luís Filipe Silva Camacho (Escola B+S Padre Manuel Álvares, Portugal)

**STUDENTS BECOME MATHEMATICS TEACHERS**

Liliana Maria Mendes Sousa (Madeira Multilingual School, Escola da APEL, Portugal)

**DEVELOPING ENVIRONMENTAL AWARENESS OF HIGH SCHOOL STUDENTS: 3RD ENKA ECOLOGICAL LITERACY CAMP AS AN EXAMPLE**

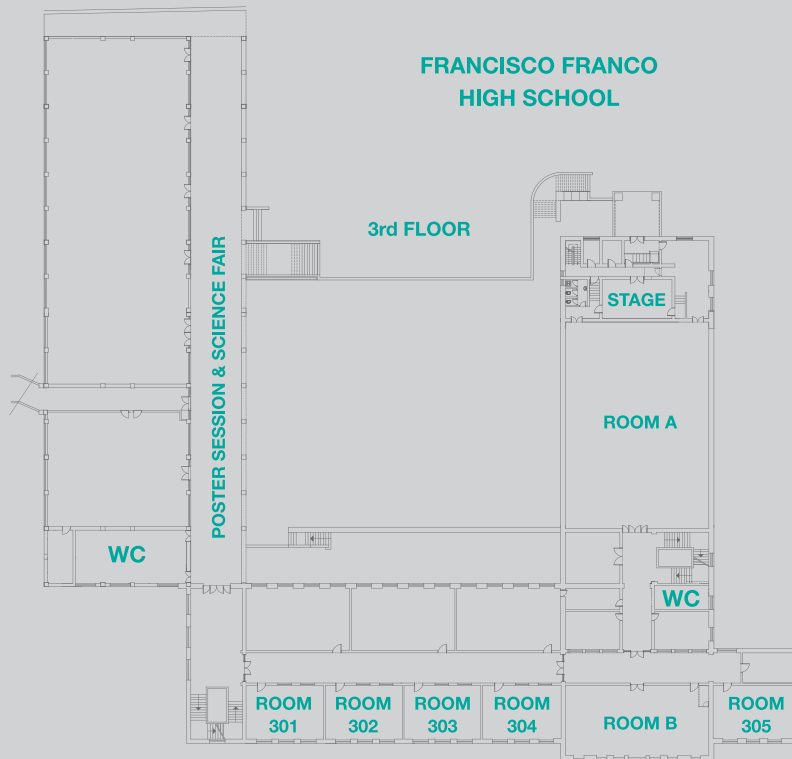
Sükrüye (Adapazarı Özel Enka Lisesi, Turkey)

12:30 - 13:00 | **Closing session** – Room A

13:00 - 14:30 | **Lunch break**

14:30 - 20:30 | **Social Program**

## FRANCISCO FRANCO HIGH SCHOOL



### USEFUL INFORMATION

#### HSCI2014 contact

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#### Address

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#### Contact person

Isabel Correia

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**Police:** +351 291 208 400

**Tourist information desk:** +351 915 555 651

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#### Public Transportation

**Taxi:** +351 291 771 771

**Bus:** +351 291 705 555

**Tourist Bus:** +351 291 764 764