

# HSCI2023 BARCELONA

All activities will take place in classrooms 3 or/and 4 on the ground floor “Edifici Durfort”, Faculty of Biology at the University of Barcelona. Avinguda Diagonal 643, 08028 Barcelona.

## MONDAY, 17

**Registration 11 – 12 h Faculty of Biology,  
“Edifici Margalef”**

**Plenary lecture/ Workshop 12 – 13 h**

**Use DIXIT Cards for a Dynamic of Networking** *J Díaz Marcos*

**Lunch 13:30 -15 h**

**Oral communications 15 – 16 h** Chair: Estela Giménez

**Science Communication for Society: Challenges and Opportunities** *VM Martins, LS Martins, CAB Magalhães, MFM Costa*

**The Scientific and the Pseudoscientific: a Journey through Epistemological Anarchism** *V Jiménez-Martínez*

**Higher-Order Conditioning: from Classical Conditioning to Mediated Learning** *M Canela*

**Bertalanffy Project @ COS – A Decade of connecting Science to Society.** *F Seibold, M Stitz*

**Opening ceremony 17:45 -20 h**

**University of Barcelona, Paranymp Hall 18 – 18:45 h**

**Gran Via de les Corts Catalanes, 585, 08007 Barcelona**

**Refreshment at the university gardens 18:45-20 h**

## TUESDAY, 18

### Plenary lecture 9:30 – 10:15 h

**Seeing Beyond the Stars: Unveiling the Principle of Reflective Telescopes for Deeper Comprehension** *CH Chou*

### Oral communications 10:30 – 12 h Chair: J Benito Vázquez

**Hands-on Spectroscopy: Linking Research and Schools** *JB Vázquez Dorrió, MJ Veiguela Fuentes, MA Queiruga-Dios, I Pozo*

**In-Service Teacher Training Mentoring Model for Scientific Inquiry Teaching** *A. Oguz, HZ Okulu*

**Hands-on Cyanotype: Exploring the Intersection of STEAM Education and Inclusion** *M Marques, MFM Costa*

**Technology-Supported Sequential Astronomy Activities to Foster Spatial Thinking** *HZ Okulu, A. Oguz*

**Creating of STEM – Equipment: Optical Workbench for Reflection and Diffraction Effects** *K Minakova, M Kirichenko, R Zaitsev*

**Image Formation with Lenses, Pinholes and Slits in an Optical Box** *J Escofet, E Pérez-Cabré*

**Visit the Scientific Park of Barcelona 12-13 h (30 people)**

**Visit the Biology Museum 13:15 -14:00 h (30 people)**

## Lunch 14:00 -15:15 h

**Oral communications: 15:30 – 17:30 h Chair: Roger Martínez Cot**

**Crazy about Biochemistry: Gateway to Biochemistry for Teenagers** *RM Cot*

**Live-Cell Imaging** *Y Kazanc, C Ruiz Sanz*

**Studying Bovine Leukemia Virus as a Risk Factor for Breast Cancer Development** *M Alfonso, J Monné, M López*

**SDS-PAGE for Protein Separation** *JX Barat Serna, N Chaves Cosano, G Rosa Moreno*

**Memory: What Is it?** *A Martínez Estapé, P Cirilo Ruiz*

**Notions of Genetic Engineering in E-coli** *P Rosales Martos, Z Yakupoglu, M Mínguez Domínguez*

**GFP in Genetic Engineering** *S Freixa Escribà*

**STEAM and Inclusive Education: Hands-on Science Experiments Using Static Electricity** *M Marques, MFM Costa*

## WEDNESDAY, 19

**Demonstration 9:30 – 10:30 h** Lively and Exciting Hand-Made Experiments – Electromagnetic Wave *N Sugimoto*

**Oral communications 10:30 – 13 h** Chair: Jordi Díaz

**An Escape-Room about Electronic Transport and Oxidative Phosphorylation for Chemical Students** *S Marín, PR de Atauri, E Moreno, S Pérez-Torras, J Farràs, S Imperial, M Cascante, JJ Centelles*

**A Scoping Review of inclusive Teaching Practice in Science Education** *B Mantulgiya Yakubu, E Yeboah Owusu*

**The Young Reporters for the Environment Program: Impact, Methodologies, and Framework in the National and International Context** *VM Martins, CAB Magalhães, MFM Costa*

**The Inter-Rater Reliability of the Scientific Inquiry-Supported Classroom Observation Protocol (SISCOP)** *HZ Okulu, A Oguz Unver, B Senler, O Bektas, S Arabacioglu, N Muslu, Y Ozdem Yilmaz Hasan*

**Introducing a Holistic Scientific Inquiry-Supported Classroom Observation Protocol** *A Oguz Unver, HZ Okulu, B Senler, S Arabacioglu, Y Ozdem Yilmaz, N Muslu*

**Making Nanorobots Mocks: Creativity Primary School** *J Díaz, J Mendoza*

**A Dichotomy. School Science: Everyday Science? Science but not as we science teachers know it. The two sciences in children's lives** *SD Tunnicliffe, A Shahrin*

**STEM to STEAM Revolution in 21<sup>st</sup> Century Education: Rational, Practices, Progress, and Considerations for the Future** *E Yeboah Owusu, DA Shamatov, KL Malone*

**Lunch 13 -14:30 h**

**Oral communications 14:30 – 15:30 h** Chair: Sue D Tunnicliffe

**Understanding and Teaching the Complexity of the Water Cycle and its Management. Integrating Science with Geography, Politics, and Economics** *D Balmer*

**Collaborative Development of a Database of Green Practices** *EN Petraki, I Berezovska*

**Database Course in Higher Education: Goals, Methodology, Approaches, Assessment** *EN Petraki*

**Visit to Barcelona 16:30 -20:30 h**

## THURSDAY, 20

### Plenary lecture 9:30 – 10:15 h

**MateMusiC: Mixing Maths and Music in an Interactive Show** *LC Pardo, N Balcells*

### Oral communications 10:30 – 12 h Chair Mireia Díaz

**The Trees, a True History** *M Bosch, A Lourenço, M Carmona, K Richter, J Gominho, E Gutiérrez*

**STEM in Play - the Vital Start: Hands-on STEM. Learning Starts in Play in the Earliest Years.** *SD Tunnicliffe*

**“Dream Garden in Flora Preschool”: As Titled by Little Scientists for STEM Laboratory Activities** *N Erentay, S Akkuş, D Bilgin*

**FISIDABO Project: Bringing Science to TIBIDABO Amusement Park** *LC Pardo, A Paz, A Deusedes*

**The Beauty of Mathematics – Explaining Abstractness** *J Frigola-Casals*

**Bringing Science Closer to Society** *JM Fernández Novell, C Zaragoza Domenech*

**Acid-Base and Redox Reactions: Didactic Experiments and Laboratory Exercises** *M Díaz Lobo*

### Demonstration 12 – 13 h

**Eggs on Science** *Z Drozd, D Mandíková*

### Lunch 13 -14:30 h

### Science Fair 14:30 – 16:30 h

**The Water Cycle in Your Classroom! Or Where Does your Tap Water Come from?** *D Balmer*

**An Entrepreneurial Approach to Electric Scooter Safety** *VM Martins, LA Martins, CAB Magalhães, MFM Costa*

**Arduino in the Physics Classroom: Sensors and Prototypes** *B. Padin*

**Reviewing Didactic Experiments for Whole Society** *JM Fernández Novell, C Zaragoza Domenech, J Méndez Viera, M Díaz Lobo*

**Workshop Hands-on Blueprint: The Cyanotype** *M Marques, P Machado, MFM Costa*

**How "Kahoot" Settled at the National Technical University "Kharkiv Polytechnic Institute"** *K Minakova, D Danylchenko, S Petrov, Y Petrova, S Radoguz*

**Core Sustainability Lab". Hall Escape Online to Work on the SGDs in the Secondary Classroom** *J Mendoza, J Díaz Marcos, H Zapata*

**Confocal microscope.** *Manel Bosch.*

### Visit Barcelona Supercomputing Center 16:45 – 18 h

### Conference Dinner Bus 18:30 – 23 h

### Conference Dinner 20 – 22,45 h

## FRIDAY, 21

### Plenary Lecture 9:30 – 10:15 h

**Chemistry and Science for Children (COQC)** *JM Fernández Novell, C Zaragoza Domenech*

### Oral communications 10:30 – 11:30 h Chair: Manuel F Costa

**The Scientific Content of the KidWind Challenge** *CH Chou*

**IoT and Safety with Scooters** *JD Martins, LA Martins, VM Martins, CAB Magalhães, MFM Costa*

**Introducing Science on Stage Europe STEM Festivals, Science on Stage Türkiye & a Sample Delegate Project: "Ecco Homo!"** *N Erentay, A Karabulut, J Bou Torrent*

### Closing Ceremony 12 - 13 h Faculty of Biology

**Refreshments 13 – 14 h**

## POSTERS

**Chemistry at Sight** *C Mans*

**SETISAT: A Mini Satellite Designed to Search for Signs of Life** *JL Rodríguez-Fernández, J Diz-Bugarín, M Carrera-Martínez, D de Saa-Suárez, P Hermida-Rial, A Pacheco-Rodríguez, D Pereira-Souto, S Alonso-Peiteiros*

**Introducing Secondary School Students to Spectrophotometric Techniques** *G Juanals*

**The Volcano of La Palma. A Retrospective Look** *N Josep, M Dolors Vidal*

**Genome editing with CRISPR-Cas: Simple, Fast and Visual** *I Bagan Costa, E Falcó Ferré*

**Exploring CO<sub>2</sub> Properties. A Learning Situation to Promote the SDG 13 Climate Action** *F Guitart*

**Science and Technology Teacher Training Project Based on Social Inclusion** *PM Castro, M Marqués, A Dapena*

**Physics Experiments Connected with a Fairy Tale Story – Educational Program for Primary School** *J Doležalová, J Houfková*

**Can Linguistics Be a Scientific Subject in Portuguese Classes at High School? Analysing Some Teachers' Opinions.** *H Rebelo*

**Bertalanffy Project @ COS – A Decade of connecting Science to Society.** *F Seibold, M Stitz*

**ADHD: Embracing the Neurodivergent Mind in Science** *M Bellés*

**Reproduction Teaching. True News Versus Fake Ones** *JE Rodríguez-Gil*

**Milestones in the Information Technology History** *I Berezovska, M Rataj*