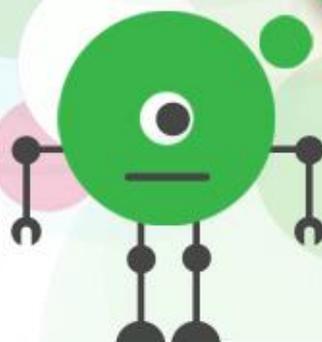# Computational Thinking *in the* classroom

From 17:00 to 20:30

December 2, 2025

Salón de grados (Main Lecture Hall) Departamental Building Vicálvaro Campus URJC

Universidad Rey Juan Carlos

PROGRAM

17:00 – 17:10 OPENING OF THE EVENT

17:10 - 17:20 Bernardino Muñoz Valadés

The European Alliance EULIST

The European Alliance EULiST, of which URJC is a member, is a group of 10 European universities comprising a total of 200,000 students. One of its main focuses is sustainability, connecting STEM knowledge with the Social Sciences and Humanities (SSH) to develop solutions to today's and tomorrow's major societal challenges—in particular climate change, the digital transition, and social cohesion. EULiST promotes challenge-based learning to educate future generations of students, researchers, academics, and lifelong learners in order to build a more sustainable and globally engaged Europe.

17:20 - 17:45 María Zapata Cáceres

What is Computational Thinking? The CoTEDI Project

We present the CoTEDI project: Computational Thinking in Education with Diversity and Inclusion. Our goal is to create accessible educational packages for developing Computational Thinking in the classroom, as well as teacher training in this competence.

17:45 - 18:15 Gema Jiménez González

CodeFarm: an educational proposal for computational thinking in early childhood

CodeFarm is an educational application designed to introduce computational thinking to children aged five to seven through video games. It develops key skills such as sequencing, problem decomposition, and data analysis, and adapts to pre-literate children. We will address how accessible design and a video game approach enable young learners to develop digital competencies from an early age.

18:15 - 18:35 **Emy Quintanar Ferreira**

Attention! Little ones programming

Computational thinking allows us, from very early ages, to bring many kinds of learning to students within a playful approach that increases their interest and, as a result, improves the teaching–learning process.

18:35 - 18:55 **Marta Torres Bañón and Elisabet Montesinos Nicás**

Think, create, and play: introducing computational thinking with True True in Primary Education

In this talk we will explore how True True devices can become a powerful tool to develop computational thinking from the early years of primary school. Through playful, hands-on activities, students learn to sequence actions, recognize patterns, and solve problems creatively—without screens. We will reflect on how to integrate these experiences in the classroom, connect them to curriculum areas, and foster autonomy, collaboration, and technological curiosity from an early age. We will also share practical examples and real activities that show that programming also means thinking, creating, and playing.

18:55 - 19:05 **BREAK**

19:05 - 19:25 **Laura Guijorro Ramos**

Multiples calculator, technology, and play in primary education

Discover how programming and computational thinking can become powerful allies in the classroom. Did you know that concepts such as prime and composite numbers, multiples and divisors, or even electrical circuits can come to life through technology? In this talk we will explore activities that connect mathematics with robotics, electronics, and basic programming. An invitation to look at the curriculum with new eyes… Are you interested?

19:25 - 19:45 **Belén Orihuela Pantoja**

Time Travelers: a practical proposal to work on computational thinking through the Ages of History in primary education

In *Time Travelers*, Computational Thinking is developed without screens through unplugged activities: building prehistoric shelters with LEGO, designing symmetrical heraldic shields, creating Renaissance choreographies, and deciphering messages in Morse code, culminating in a collaborative timeline. These proposals develop decomposition, pattern recognition, algorithmic thinking, and debugging, with high student motivation and improvement in historical chronology and computational skills.

19:45 - 20:00 **AWARDS CEREMONY**

20:00 - 20:20 **Presentation of the first-prize winning experience**

20:20 - 20:30 **CLOSING OF THE EVENT**