

Session title: **Teaching Computational Thinking in K-12 Classrooms with Online Technology**

Description of session:

This poster presents the objectives, structure, content and results of a course in Computational Thinking. The course is being implemented in schools in the Dominican Republic during the 2nd semester of academic year 2016. It uses Scratch as the programming environment and Moodle as the learning platform. The methodology of the course makes extensive use of technology-based learning tools, which include self-test, test, and Peer to Peer assessments.

The course objectives include: 1) the introduction to the world of computational thinking in primary schools; 2) implementing Computer learning on the part of the students; 3) facilitate the course delivery on the part of the teacher without requiring that he/she be an expert in computers and computation; 4) provide teachers and schools a system for recording and monitoring the individual learning of each student.

It is an introductory course to computers and computation that includes: 1) computational thinking and expression (reading and writing in a formal language to solve problems); 2) abstraction (how to communicate complex ideas simply, and logically break down problems); 3) integration of multimedia content (text, images, sound, data, graphics); 4) development of objects and functional blocks (objects, programs); 5) interactive programs (events and event management); 6) fundamental programming concepts (decisions, loops, variables, functions, sequential and parallel execution).

The course is organized in 10 sessions. Each session contains: 1) Video Tutorials: sets of tutorials in which the concepts are introduced; 2) Practice: a Scratch project template with which the students play and explore; 3) Auto Test: Self-evaluation which allows the student to assess his/her level of acquired knowledge; 4) P2P (Peer to Peer evaluation): Students create Scratch projects to solve problems, and later the projects are evaluated by partner students following a common rubric. 5) Test: evaluation test measuring the degree of knowledge of students.