

Coding Science with CERN

"Coding Science" is an inclusive, free and open event that aims to bridge the gap between on one hand, modern science as practiced at CERN, and on the other, STEM education, by introducing children to computational thinking and scientific experimentation.

Its main objectives are :

- * To introduce the 4 to 18 year old demographic to programming and automation techniques used today to drive experimental science.
- * To curate, reuse existing learning platforms that address programming and STEM education, or fund the creation of new platforms if needed, by establishing partnerships with other science and technology research centers (for instance INRIA).
- * To reuse technologies used, pioneered or maintained at CERN and made accessible to the public via CERN Knowledge Transfer (e.g. C2MON, ROOT, EduSafe etc...).

Coding Science leverages learning technologies pioneered in Geneva by groundbreaking psychologists Prof. Jean Piaget and Prof. Seymour Papert, and subsequently developed at the Massachusetts Institute of Technology (USA).

What differentiates this initiative from other STEM programs :

- * It proposes to initiate children to a "world of connected scientific objects", which will be a fundamental ingredient in tomorrow's scientific work.

* It leverages physical computing and programmable objects (also referred to as Internet Of Things) to provide a tangible introduction to programming and modern scientific problems (that of data acquisition, visualization and analysis).

* It provides an uninterrupted learning path from early learning (4 year-olds) to young science professionals (18+), relying on the same open-source technologies that are prevalent in science today.

* It delivers a complete, from the ground up, training experience,

ranging from assembling the material to configuring it before programming it, ensuring there is no fear of "breaking" anything that cannot be repaired by the student herself.

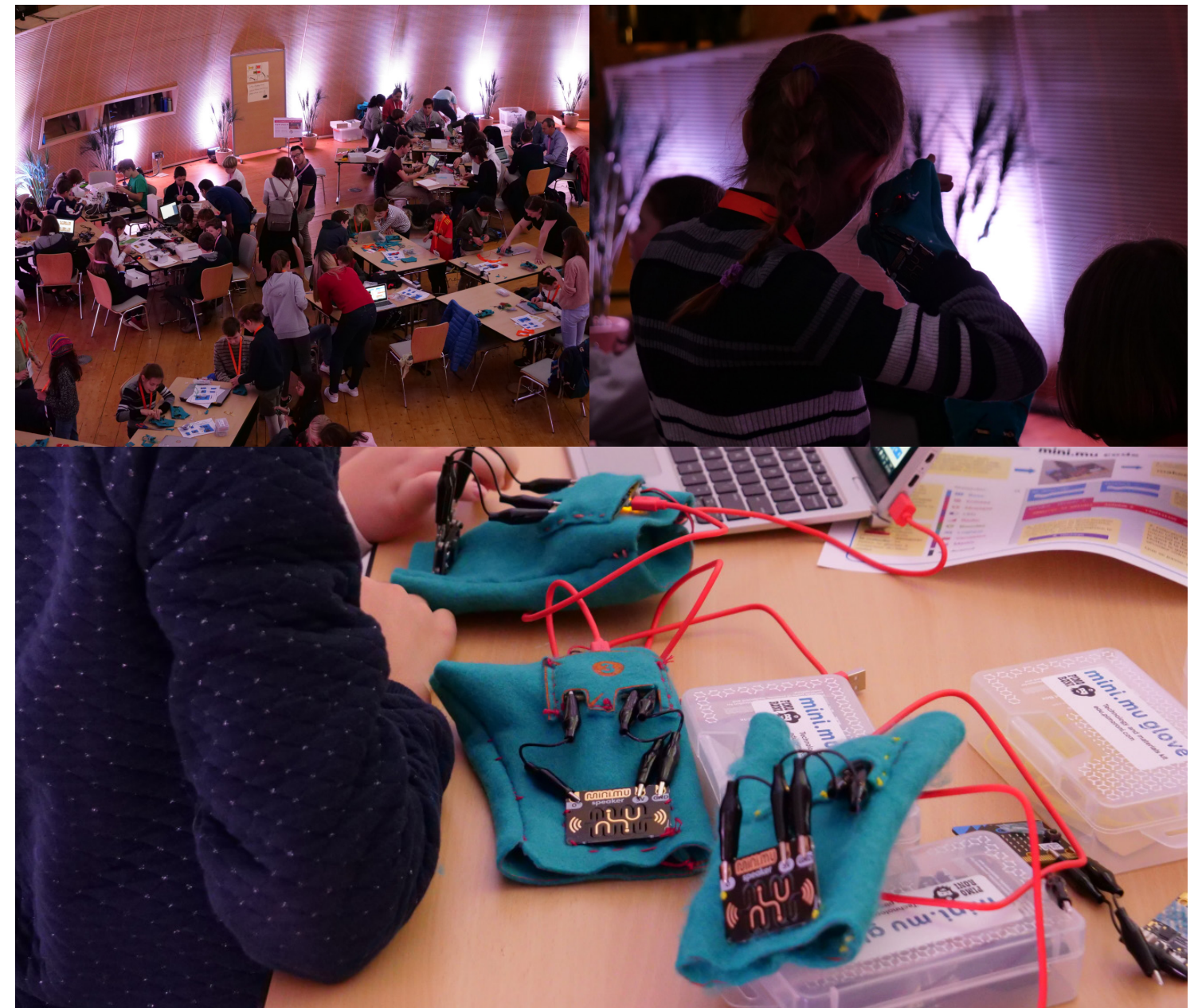
* It proposes to rely on existing CERN scientific infrastructure, CERN KT*-backed technologies and know-how to deliver compelling and useful training grounds, allowing CERN members to reuse their expertise and make them more accessible to early learners.

Coding Science has been running for the past four years, at different venues around Geneva. The organisers are looking for opportunities to finance future events and export the concept to venues beyond France and Switzerland.

<https://codezlasience.ch>



Logo Codez la Science 2019



Coding Science sessions at the CERN Globe of Innovation

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