



Contribution ID: 153

Type: **Oral presentation**

## **Heat and temperature in middle school: step by step towards complexity through experiments and a narrative approach**

*Tuesday 4 July 2023 14:00 (20 minutes)*

As part of the AT-NE-ST project, which aims to bring children closer to complexity and sensors, we designed and tested an educational path for middle schools concerning the development of the concepts of heat and temperature. It is based on a narrative approach and the exploitation of basic mental schemes. A series of measurements are carried out using appropriate sensors on model buildings in which parameters can be varied. Results show that pupils are able to describe these experiments, but still struggle when it comes to developing a coherent abstract model for even the simplest thermal phenomena.

### **How would you like to present your contribution?**

Live in Košice (time slot to be allotted based on the programme)

### **Target education level (primary)**

Lower-secondary education

### **Target education level (secondary, optional)**

Pre-service teacher education

**Primary authors:** COLLETTI, Leonardo (Free University of Bozen-Bolzano); KRIK, Soufiane (Free University of Bozen-Bolzano); LUGLI, Paolo (Free University of Bozen-Bolzano); CORNI, Federico (Free University of Bozen-Bolzano)

**Presenter:** CORNI, Federico (Free University of Bozen-Bolzano)

**Session Classification:** Innovative strategies at school

**Track Classification:** Innovative strategies and pathways to improve physics education at school