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From the Aesthetics of Interdisciplinarity to Transdisciplinary STEAM Learning

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There is a long history of interdisciplinary discussions on the relations between science, mathematics, geometry, art, aesthetics, and artistic praxes. These discussions remain active and pertinent today. Scholars and artists share a common interest in combining creative thinking, intellectual curiosity, and aesthetic sensibility in their work, various experts working in different scientific and technological fields are inspired by phenomena that combine mathematical and artistic qualities. Respectively, several contemporary artists, graphic designers, craftsmen, and craftswomen are fascinated by scientific discoveries, mathematics, and geometry and use the formulas and principles of each in different ways in their artistic and creative work. In the first part of the presentation, we will introduce the concept of “aesthetics of interdisciplinarity” for the description of mathematics and art connections. In the second part of the presentation, we will explore the concept’s educational potentials. We will present characteristic examples from the Experience Workshop Math-Art Movement (www.experienceworkshop.org) recent projects, such as (1) contributions to the Ars Electronica Festival’s Youth Program, to the (2) “Kids Inspiring Kids for STEAM” Erasmus+ project and (3) to the survey of a mobile interactive mathematics exhibition, called “Art of Mathematics”.