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### ***Computational Thinking and Creativity***

*Creativity is a characteristic property of constructionist learning. Creativity is often connected to learning by doing and needs a high amount of freedom in choice of activities and learning steps.*

*Computational Thinking denotes thinking processes that are connected to problem solving with means of informatics methods. Computational Thinking does not only involve algorithmic thinking skills that is useful in programming and algorithm design but also skills like abstraction, decomposition, generalization and evaluation that are used in problem definition, system modelling and system evaluation. Computational Thinking has become part of informatics school curricula in many countries. The paradigm of competence orientation has led to very detailed curricula that describe a large variety of detailed competences. The high amount of details can lead to a kaleidoscopic teaching practice. Though from a constructionist viewpoint it seems more promising to learn with learning settings that allow creativity, fun and sense of achievement.*

*We show a series of examples how Computational Thinking can be learned in learning settings and didactic projects that allow creativity, fun and sense of achievement.*

### **About speaker**

**Gerald Futschek** is head of the Institute of Software Technology and Interactive Systems at Vienna University of Technology. His research interests are Software Engineering and Informatics Education at school and university level as well.

He is active in supporting young people in learning Computational Thinking by contests and competitions like Bebras Challenge and International Olympiad of Informatics.

He was an early adopter of Logo and Logo style learning in teaching young people the first steps of programming and educator of teachers at university level.

He was organizer and chair of Eurologo 2001 in Linz and Constructionism 2014 in Vienna, Austria.