
The science in computer science: In search of new frameworks

Viola Schiaffonati*¹ and Mario Verdicchio*²

¹Politecnico di Milano – Italy

²University of Bergamo – Italy

Abstract

In the debate on the disciplinary nature of computing, the traditional tools of philosophy of science are often used, like in the case of the experimental method, which is still considered to play a fundamental role in the analysis of the methodological nature of the discipline. Instead of trying to adapt long established concepts to accommodate computing into existing frameworks, we aim for the introduction of new concepts that reflect the peculiar status of computing in between science and engineering. In our endeavor, in order to stretch the traditional notion of experiment and its nature and role in computing, we plan to move along three different but interconnected directions: the notion of directly action-guiding experiment that, in opposition to the traditional notion of controlled experiment, characterizes a significant part of the experimental practice in computing; the debate around engineering ontology and engineering epistemology, and whether adapting existing conceptual frameworks suffice to take into account new practices; technoscience as an engineering way of being in science, where theoretical representation and technical intervention cannot be held apart even in theory.

*Speaker