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Effectiveness and programmability. In defense of a relational notion of computation. (English) [Zbl 07633806]

Summary: We focus on the distinction between effectiveness and programmability. We propose that effectiveness can be understood in terms of a mechanistic account which may also assume an axiomatic approach. Programmability can be, in turn, analyzed as the characteristic feature of a relational account of computation. A system will be called computational if it is both effective and programmable and, furthermore, being computational will turn out to be a gradual concept that depends on the degree of programmability of a system. We show that many fundamental questions in philosophy of computing can be better addressed from this perspective.

For the entire collection see [Zbl 1499.68004].

MSC:
68Nxx Theory of software