

It's time for Curricular Updates in Computing and Embedded Systems

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Reconfigurable Computing (RC), the second RAM-based machine paradigm, offers drastic reductions of the electric energy budget and offers speedup factors by several orders of magnitude - compared to using the von Neumann paradigm, now gradually losing its dominance. The main problem in RC deployment is given by educational deficits inhibiting to really understand what RC means. This is indicated here also by using the term „software“ although this paradigm is not instruction-stream-based.

Each of the many different application domains has only a limited view of computing and takes it more as a mere technique than as a science on its own. This fragmentation makes it very difficult to bridge the cultural and practical gaps, since there are so many different actors and departments involved. In curricula we need a transdisciplinary unification in dealing with RC, embedded system and supercomputing problems, which are shared across many different application domains. We urgently need an update of CS curricula and a re-coordination of other related curricula.