

Should quantum processor design be considered a topic in Computer Architecture education?

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New trends in computer architecture include non-general purpose architectures, brain-inspired design, agile hardware development and environmentally responsible design. Computer Science students need to understand computer architecture to develop programs that can achieve high performance through a programmer's awareness of parallelism and latency. In a re-visit of curriculum guidelines, students could develop skills and competencies in less mature yet cutting-edge topics, including quantum computing. For example, *should students understand and appreciate quantum processor design's components and characteristics?* In a task to revise curricular guidelines, one faces the decision of which topics may be obsolete and should be dropped or modified. Equally important is deciding the set of topics that must be included. Such questions are hard to address, particularly for a curriculum intended to remain fresh under a 10-years horizon. For example, the danger of not properly promoting the discussion of quantum processor design in the new ACM/IEEE-CS/AAAI CS202X curricula is the long waiting cycle (15 years+) for any new revision. This BOF will foster the participants' interactions into a debate of whether new curricular guidelines should contain quantum processor design as part of the Architecture and Organization (AR) Knowledge Area.

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