

Theory of cycles in computing

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We review joint work with Richard Hammack on special cycle bases that geometrically generate all cycles in the graph. Kolmogorov's cycle criterion and groupoid commutativity, if true for such basis cycles, are true for all cycles. We aim for a brief but clear description of the idea and its possible relevance for quantum computing. *Which other properties hold for the mod-2 sum of two cycles with a common nontrivial path if they hold for both parents?*

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