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The Bayesian analysis toolkit: version 1.0 and beyond

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The Bayesian analysis toolkit (BAT) is a C++ package centered around Markov-chain Monte Carlo sampling. It is used in analyses of various particle-physics experiments such as ATLAS and Gerda. The software has matured over the last few years to a version 1.0. We will summarize the lessons learned and report on the current developments of a complete redesign targeting multicore and multiprocessor architectures and supporting many more sampling algorithms both built-in and user-supplied.

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