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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.

Primary author: Dr BEAUJEAN, Frederik (LMU Munich)

Co-authors: Prof. CALDWELL, Allen (Max Planck institute for physics); Dr GREENWALD, Daniel (Technical University Munich); Dr KOLLAR, Daniel (CERN); Prof. KROENINGER, Kevin Alexander (Technical University Dortmund); Dr SCHULZ, Oliver (MPI for Physics, Munich); Dr KLUTH, Stefan (Max Planck institute for physics)

Presenter: Dr BEAUJEAN, Frederik (LMU Munich)

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