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Abstract for an Invited Paper
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Event Generators for Particle Physics

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I will review recent progress in developing and automating the basic set of simulation tools in high energy particle physics, including programs which are capable of automatic implementation of new physics models and generating the corresponding Feynman rules, various matrix element calculators, and event generators producing both parton-level and fully hadronized/showerted Monte Carlo event samples. I will also discuss methods for speeding up the generation of new physics samples, which could be useful in the upcoming new physics searches at the LHC.