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Michael Joswig, Benjamin Mueller and Andreas Paffenholz*

(paffenholz@math.fu-berlin.de), Freie Universitaet Berlin, Institut fuer Mathematik,
Arnimallee 3, 14195 Berlin, Germany. *Lattice Polytopes in polymake*. Preliminary report.

The `polymake` software system by Gawrilow and Joswig deals with convex polytopes and related objects from geometric combinatorics. The forthcoming `polymake` release 3 will contain an application that deals with specific properties of lattice polytopes. The main focus of the provided methods is on toric geometry. `polymake` provides a unified interface to several existing software packages for lattice polytopes (e.g. `4ti2`, `latte`, `normaliz`), as well as various new methods that link between the programs and compute additional properties. In my talk I will give a short introduction to the `polymake` system and then report on the lattice polytope application. (Received March 02, 2009)