**Kazhdan's property (T) and semidefinite programming**
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Kazhdan's property (T) for groups has a number of applications in pure and applied mathematics. It has long been thought that groups with property (T) are rare among the "naturally-occurring" groups, but it may not be so and it may be possible to observe this by extensive computer calculations. After an introduction, I will present a computer assisted (but mathematically rigorous) method of confirming property (T) based on semidefinite programming with some operator algebraic input. I will report the recent result by M. Kaluba, P. Nowak, and me, and the following result by Kaluba, D. Kielak, and P. Nowak. It confirms property (T) of $\mathrm{Aut}(F_d)$, $d > 4$, which solves a well-known problem in geometric group theory.