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Athens, GA 30602, and **Andreas Paffenholz**, TU Darmstadt, Fachbereich Mathematik,
Schlossgartenstrasse 7, 64289 Darmstadt, Germany. *Polyhedral Adjunction Theory*.

In joint work with Sandra Di Rocco, Christian Haase and Andreas Paffenholz we study the adjunction theory of toric varieties from a polyhedral viewpoint. Essentially, 'polyhedral adjunction theory' is the question how a rational polytope P changes, when we move the facets of P by a constant value $c > 0$ inwards. More precisely, we define the adjoint polytope $P(c)$ as the set of those points in P , whose lattice distance of any facet of P is at least c . In this talk I present the convex-geometric invariants corresponding to the spectral value and the nef value of a polarized toric variety associated to a lattice polytope P . Our main result shows that an n -dimensional lattice polytope P has lattice width one, if the adjoint polytope $P(c)$ is empty for any $c > 2/(n+1)$. If time allows, I will explain the relations to recent results in Ehrhart theory and on dual defect manifolds and state polyhedral versions of open questions in adjunction theory. (Received September 12, 2010)