Cohomological Hall algebras of quivers

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The Cohomological Hall algebra of a quiver was introduced by M. Kontsevich and Y. Soibelman as a tool to study its Donaldson-Thomas invariants. We review the construction of Cohomological Hall algebras, discuss general structural results, relate them to moduli spaces of quiver representations and Donaldson-Thomas invariants, and discuss several examples and open questions. This is joint work with H. Franzen.