

Noncommutative Hilbert schemes

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The Hilbert schemes of a (noncommutative) algebra are varieties parametrizing left ideals of finite codimension. First the construction of these varieties is given. Then we concentrate on the structure of Hilbert schemes of free algebras and construct cell decompositions. Finally, the cohomology of Hilbert schemes of path algebras of quivers (and maybe more general algebras, like quasi-free ones) is discussed.