

Spectral Schemes as Distributive Lattices

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A partial realisation of Hilbert's programme has recently proved successful in commutative algebra. One of the key tools is Joyal's point-free presentation of the Zariski spectrum as a distributive lattice. Extending this to algebraic geometry requires to first reformulate Grothendieck's language of schemes in first-order terms. It turns out that distributive lattices even suffice for all the schemes whose underlying topological spaces are spectral, which includes the Noetherian schemes.