

Some topological exercises around a Boolean algebra

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In the context of formal languages in computer science, distributive lattices and Boolean algebras of languages are investigated using duality in order to study, separate, and compare complexity classes. This requires among other:

- calculating particular complex dual spaces from 'known' quotients;
- identifying 'generating sets' of equivalence relations on Stone spaces yielding their quotient spaces;
- finding a method for 'picking points' in the Stone-Cech compactification of discrete spaces.

We illustrate these tasks on a particular simple case which is the subject of joint work with Andreas Krebs and Jean-Eric Pin.