

Sym(\mathbb{N})-Noetherianity of Polynomial Algebras and Topological Spaces

Noetherianity is a desirable property of a ring because it ensures that all ideals are finitely generated. In some \mathbb{C} -algebras where Noetherianity does not hold, a notion of Noetherianity “up to symmetry” still holds. On the geometric side, Noetherianity of a topological space is a nice property since it guarantees a finite decomposition into maximal closed irreducible subsets. Again, one can ask whether a non-Noetherian topological space is Noetherian “up to symmetry”. In this talk, I will introduce the notion of Sym(\mathbb{N})-Noetherianity for \mathbb{C} -algebras and topological spaces, both with an action of the infinite symmetric group Sym(\mathbb{N}), and state the main results obtained in my Master’s thesis.