

报告题目: Formalisation of the Category of Hopf algebras in Lean4

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报告时间: 北京时 8 月 27 日, 周二下午 15:00-16:00

报告地点: 藕舫楼 702

报告摘要: Hopf algebras are used in various areas of mathematics and theoretical physics, such as algebraic geometry and quantum groups. In this article, we formalise a few basic results about Hopf algebras. In particular, we prove that the set of R -algebra homomorphisms $\text{Hom}_R(A, L)$ from a commutative R -Hopf algebra A to a commutative R -algebra L can be endowed with a group structure under the convolution product. Furthermore, we also formalise an anti-equivalence between the category of commutative R -Hopf algebras and the category of affine group schemes over R , where the latter is defined as group objects of corepresented functors from commutative R -algebras to Set .

报告人简介: Yunzhou Xie is a student of professor Kevin Buzzard in Imperial College London who accomplished several minor projects with him and his phd students to assist his great goal of formalising Fermat Last Theorem in to Lean4 (address : <https://github.com/ImperialCollegeLondon/FLT>).

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