

Infinite Grassmannian

Satoshi Kondo

IPMU Assistant professor

The infinite Grassmannian represents vector bundles on a manifold. In the homotopy category, it represents topological K-theory. The same holds true in the algebraic setting. In the motivic homotopy category (constructed using the Nisnevich topology and the condition that the affine line is contractible), it is known that it represents (homotopy invariant) algebraic K-theory.

A morphism $A \rightarrow B$ in the Q-construction of the exact category of vector bundles is an isomorphism class of diagrams $A \xleftarrow{q} C \xrightarrow{i} B$ where A, B, C are vector bundles, i is an admissible monomorphism, and q is an admissible epimorphism.

