

國立清華大學數學系學術演講

NTHU MATH Colloquium

講題 The algebraic splitting of $bu^{BSO}(2n)$

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時間 2020.10.22 (Wed.) 13:00 – 14:00

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Abstract

Complex connective K-theory is represented by the spectrum bu , which is related to the classifying space of the infinite unitary group. Determining the stable splitting of the spectra bu^X for a space X will give rise to the structure of the bu -homology of X . In this talk we show that the mod 2 cohomology of $bu^{BSO}(2n)$ is isomorphic to a direct sum of E -modules, $E = \mathbb{Z}/2\langle Q(0), Q(1) \rangle$. This would give the algebraic splitting of the complex connective K-theory of $BSO(2n)$. Although the full topological splitting cannot be obtained yet due to the complexity of the modules, it nevertheless still gives certain information about the properties of $bu^{BSO}(2n)$.