



Frontiers of Mathematics Lecture

S-dual of Hamiltonian G spaces and relative Langlands duality

Abstract

Let G be a complex reductive group, and M be a smooth affine algebraic symplectic manifold with a Hamiltonian G action. We need to assume M is a cotangent bundle at this moment, but we expect that this condition is relaxed. The S-duality gives an affine algebraic, possibly singular, symplectic manifold M^\vee with a Hamiltonian G^\vee action, where G^\vee is the Langlands dual group of G . This S-duality is a variant of Coulomb branch construction by BFN. It conjecturally gives a pair of Hamiltonian spaces in relative Langlands program, proposed by Ben-Zvi, Sakellaridis and Venkatesh.

Biography

Hiraku Nakajima is a Japanese mathematician, and a Professor of the Kavli Institute for the Physics and Mathematics of the Universe at The University of Tokyo. He is the President of the International Mathematical Union for the 2023–2026 term.

He obtained his Ph.D. from the University of Tokyo in 1991. In 2002 he was plenary speaker at the International Congress of Mathematicians in Beijing. He won the 2003 Cole Prize in algebra from the American Mathematical Society for his work on representation theory and geometry. He proved Nekrasov's conjecture.



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Date :

4 November, 2024 (Monday)

Time :

4:00 – 5:00pm

(Tea Reception starts at 3:30 pm)

Venue :

P4, Chong Yuet Ming

Physics Building

The University of Hong Kong