BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

FAMILY FLOER SYZ CONJECTURE AND EXAMPLES

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CCDS 365, Mar 29, 2023, 4-5pm

Tea: 3:45pm in Room 365

Abstract: The Strominger-Yau-Zaslow (SYZ) conjecture, proposed as a geometric mechanism underlying mirror symmetry for Calabi-Yau manifolds, has long presented significant challenges in defining 'dual' torus fibrations and understanding singular fibers. In this talk, I will start with a review of the basics of integrable systems in both symplectic and non-archimedean contexts. I will then briefly discuss how to make the 'dual' fibration mathematically precise by incorporating quantum correction information and how to include dual singular fibers through the study of non-archimedean topology. Lastly, I will present several concrete examples, including toric Calabi-Yau manifolds, conifold, and A_n singularity. Notably, these examples are elementary and quite down-to-earth.

See `http://math.bu.edu/research/geom/seminar.html` or contact Yu-Shen Lin (*yslin@bu.edu*) or Brian Williams (*bwill22@bu.edu*) for more information.