BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

CLUSTER DUALITIES AND SUPERPOTENTIALS FOR GRASSMANNIAN

Man-Wai Cheung Kavli Institute for the Physics and Mathematics of the Universe (IPMU)

CCDS 365, Feb 1, 2023, 4-5pm

Tea: 3:45pm in Room 365

Abstract: Marsh-Rietsch described a Landau-Ginzburg model for Grassmannians consisting of the complement of a particular anti-canonical divisor in a Langlands dual Grassmannian together with a superpotential expressed in terms of Plücker coordinates. On the other hand, Grassmannians carry cluster structure which we can write down a superpotential from the work of Gross-Hacking-Keel-Kontsevich. A natural question is — are the two potentials the same or not? Together with Bossinger, Magee, and Najera-Chavez, we identified the cluster structures of the two sides of the mirror Grassmannians and identified the Marsh-Rietsch and the Gross-Hacking-Keel-Kontsevich potentials. As a consequence, we identified the two mirror constructions.

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.