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End of The World brane networks for infinite distance limits in CY moduli space

Thursday, 27 June 2024 15:45 (15 minutes)

Dynamical Cobordism provides a powerful method to probe infinite distance limits in moduli/field spaces parameterized by scalars constrained by generic potentials, employing configurations of codimension-1 end of the world (ETW) branes. These branes, characterized in terms of critical exponents, mark codimension-1 boundaries in the spacetime in correspondence of finite spacetime distance singularities at which the scalars diverge. Using these tools, I will explore the network of infinite distance singularities in the complex structure moduli space of Calabi-Yau fourfolds compactifications in M-theory with a four-form flux turned on, which is described in terms of normal intersecting divisors classified by asymptotic Hodge theory. I will provide spacetime realizations for these loci in terms of networks of intersecting codimension-1 ETW branes classified by specific critical exponents which encapsulate the relevant information of the asymptotic Hodge structure characterizing the corresponding divisors.

Presenter: ANGIUS, Roberta

Session Classification: Parallel session