Center for Neutrino Physics Seminar

Special Date

Professor Tristan Hubsch

Howard University

Evidence for non-Convex Mirror Manifolds

Thursday, October 6, 2016

4:00 pm—5:00 pm

304 Robeson Hall

While being the prime candidate by far in providing the framework for a "theory of everything," super-string theory also requires hiding 60% of space-time.

Finding out ways of doing so has spurred a competition between physics and mathematics that continues to deliver surprises on both fronts.

The recent realization by the V Tech research group that such hidden space-time dimensions may well be described using Laurent defining equations has inspired a re-thinking of so-called toric geometry that describes the ground states in Witten's gauged linear sigma model (GLSM) --- the underlying world-sheet field theory. Starting with an adaptation of GLSM, I will describe the corresponding adaptation of toric geometry, discovering that a by now quartacentenarian construction of mirror manifolds thrives within these non-convex polytopes.