BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

A PRODUCT OPERATION ON DISK FIBER BUNDLES, AND A CONFIGURATION SPACE WITH MOUSE DIAGRAMS

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Tea: 3:45pm in Room 365

Abstract: In this talk we will be concerned with smooth, framed fiber bundles whose fibers are the standard d-dimensional disk, trivialized along the boundary. "Kontsevich's characteristic classes" are invariants defined for these bundles: given such a bundle $\pi : E \to B$, we can associate to it a collection of cohomology classes in $H^*(B)$. On the other hand, there is a "bracket operation" for these bundles defined by Sander Kupers: namely, given two such bundles π_1 and π_2 as input, we can output a "bracket bundle" $[\pi_1, \pi_2]$. I will talk about this bracket bundle construction and a formula relating the Kontsevich's classes of $[\pi_1, \pi_2]$ with those of π_1 and π_2. The main input of the proof is a novel but very natural configuration space generalizing the Fulton-MacPherson configuration spaces. This is a work in progress joint with Robin Koytcheff and Sander Kupers.

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.