

BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

A GEOMETRIC INTERPRETATION OF THE SEIBERG-WITTEN INVARIANTS

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September 12, 2018, 4:00 – 5:00pm
Math/Computer Science, Room 148
111 Cummington Street, Boston

Tea: 3:45pm in Room 144

Abstract: Whenever the Seiberg-Witten (SW) invariants of a closed oriented 4-manifold X are defined, there exist 2-forms on X which are symplectic away from some circles. When there are no circles, i.e. X is symplectic, Taubes' "SW=Gr" theorem asserts that the SW invariants are equal to well-defined counts of J-holomorphic curves (Taubes' Gromov invariants). In this talk I will describe an extension of Taubes' theorem to non-symplectic X : there are well-defined counts of J-holomorphic curves in the complement of these circles, which recover the SW invariants. This "Gromov invariant" interpretation was originally conjectured by Taubes in 1995. This talk will involve contact forms and spin-c structures.

See <http://math.bu.edu/research/geom/seminar.html> or contact Yoosik Kim yoosik@bu.edu or Siu-Cheong Lau lau@bu.edu for more information.