

BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

**KONTSEVICH'S FORMALITY
QUASI-ISOMORPHISM IS "DEMYSTIFIED"**

Vasily Dolgushev
Department of Mathematics
Temple University

March 2, 2016, 4:00 – 5:00pm
Math/Computer Science, Room B19
111 Cummington Street, Boston

Tea: 3:45pm in Room 144

Abstract: Back in 1997, Maxim Kontsevich proved that the algebra of polydifferential operators on a smooth manifold is formal (i.e. quasi-isomorphic to its cohomology). The known constructions of Kontsevich's formality quasi-isomorphism involve "transcendental" tools: the original construction, due to Kontsevich, is based on the configuration space integral, while Tamarkin's construction involves Drinfeld's associator. In my talk, I will describe an explicit recursive construction whose output is a formality quasi-isomorphism for polydifferential operators defined over rationals. The operad OCHA governing the open-closed homotopy algebras is essential for this construction. My talk is partially based on the paper <http://arxiv.org/abs/1306.6733>.

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