

1135-55-3129      **Maksym Zubkov\*** (mzubkov@uci.edu), 13756 Cantlay St, Van Nuys, CA 91405. *Homotopy Commutative Algebras, Knots and Graphs*. Preliminary report.

Earlier Helme-Guizon and Rong have defined a chromatic graph homology complex for a graph  $G$  and the coefficient commutative DG algebra  $A$ . In a recent joint paper with V. Baranovsky we have extended this definition to the case when  $A$  is an algebra over the brace operad. I plan to explain that when  $A$  is the cochain algebra of a compact oriented manifold  $M$ , this complex computes the homology of a generalized configuration space of  $M$ , constructed from  $G$ . When  $G$  is the complete graph this reduces to the usual configuration space of ordered sets of distinct points in  $M$ . (Received September 26, 2017)