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Anton Zeitlin* (anton.zeitlin@yale.edu), 442 Dunham Lab, 10 Hillhouse Avenue,
Department of Mathematics, New Haven, CT 06511. *Homotopy BV algebras, Courant algebroids
and String Field Theory.*

We construct the homotopy BV algebra related to vertex algebroid with a Calabi-Yau structure. We show that the corresponding homotopy commutative algebras and homotopy Lie algebras are related to Yang-Mills and Einstein equations and their string theory deformations. We also discuss several open questions, related to interrelations between homotopy algebras and vertex algebras. (Received September 02, 2010)