ΑΡΙΣΤΟΤΕΛΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ

Τμήμα Μαθηματικών
Τομέας Γεωμετρίας

Σεμινάριο Γεωμετρίας

Basic curvature and the Atiyah cocycle in higher gauge theory

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Περίληψη

I will discuss the role of the so-called basic curvature for connections on Lie and Courant algebroids and of the Atiyah cocycle for connections on dg-manifolds in topological sigma models and higher gauge theories. The basic curvature measures the departure from compatibility between a connection on a Lie or Courant algebroid and the binary bracket on it and it appears in the BV/BRST differential of topological sigma models in 2D and 3D. This includes AKSZ models, such as the Poisson sigma model, as well as non-AKSZ models, such as twisted-Poisson and Dirac sigma models. Moreover I will argue that in the graded-geometric description of higher gauge theories, the structure of gauge transformations is governed by a Kapranov L-infinity[1] algebra, whose binary bracket is given by the Atiyah cocycle.

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