A note on cohomology of locally trivial Lie groupoids on triangulated spaces

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Mishchenko and Oliveira proved that, for each transitive Lie algebroid defined on a compact triangulated manifold, its Lie algebroid cohomology and piecewise smooth cohomology are isomorphic. Based in that isomorphism, it is proved that the Rham cohomology of a locally trivial Lie groupoid G on a smooth manifold M is isomorphic to the piecewise Rham cohomology of G, in which G and M are manifolds without boundary and M is smoothly triangulated by a finite simplicial complex Ksuch that, for each simplex Δ of K, the inverse images of Δ by the source and target mappings of Gare transverses submanifolds in the ambient space G.

References

- [1] A. S. Mishchenko and J. R. Oliveira. Whitney-Sullivan constructions for transitive Lie algebroids, to appear.
- [2] D. Sullivan. Infinitesimal computations in topology, Publ. I.H.E.S. 47: 269–331, 1977.
- [3] H. Whitney. Geometric Integration Theory, Princeton University Press, 1957.