

Footnotes

1. I probably mean “a functor from some fixed “structure multi-category” to the multi-category of sets, extended to formal linear combinations”.
2. A Leibniz algebra is a Lie algebra minus the anti-symmetry of the bracket; I have previously erroneously asserted that here $\mathcal{A}(K)$ is Lie; however see the comment by Conant attached to this talk’s video page.
3. See my paper [BN1] and my talk/handout/video [BN3].
4. See [BN5] and my talk/handout/video [BN4].
5. Not so old and not quite written up. Yet see [BN2].

References

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- [BN3] D. Bar-Natan, *Braids and the Grothendieck-Teichmüller Group*, talk given in Toronto on January 10, 2011, <http://www.math.toronto.edu/~drorbn/Talks/Toronto-110110/>.
- [BN4] D. Bar-Natan, *From the $ax + b$ Lie Algebra to the Alexander Polynomial and Beyond*, talk given in Chicago on September 11, 2010, <http://www.math.toronto.edu/~drorbn/Talks/Chicago-1009/>.
- [BN5] D. Bar-Natan, *Finite Type Invariants of w -Knotted Objects: From Alexander to Kashiwara and Vergne*, in preparation, online at <http://www.math.toronto.edu/~drorbn/papers/WKO/>.
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Plan

1. (8 minutes) The Peter Lee setup for (K, I) , “all interesting graded equations arise in this way”.
2. (3 minutes) Example: the pure braid group (mention PtB , too).
3. (3 minutes) Generalized algebraic structures.
4. (1 minute) Example: quandles.
5. (4 minutes) Example: parenthesized braids and horizontal associators.
6. (6 minutes) Example: KTGs and non-horizontal associators. (“Bracket rise” arises here).
7. (8 minutes) Example: wKO ’s and the Kashiwara-Vergne equations.
8. (12 minutes) vKO ’s, bi-algebras, E-K, what would it mean to find an expansion, why I care (stronger invariant, more interesting quotients).
9. (5 minutes) wKO ’s, uKO ’s, and Alekseev-Enriquez-Torossian.