

## On graded and ungraded associativity

*Friday, December 9, 2022 9:00 AM (50 minutes)*

For a long time, by now, I have been working on geometries related to associative and non-associative algebras. First of all, I will discuss some aspects of associative structures, such as *associative geometries*, defined in work with M. Kinyon, <https://arxiv.org/abs/0903.5441>. Second, I will propose a framework of *graded associative* structures, following <https://arxiv.org/abs/2109.00878v1>. This graded framework grew out of the very general, functorial and ungraded approach to differential calculus <https://arxiv.org/abs/2006.04452> – my hope is that this functorial approach would make sense also in the graded framework, thus opening a way to a functorial super-calculus. However, for the time being, this rather is conjectural and speculative – see also <http://wolfgang.bertram.perso.math.cnrs.fr/WB-PCS.pdf>

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