Rota-Baxter type operators on Trusses and Derived structures

A. Makhlouf

Abdenacer MAKHLOUF (Andenacer.makhlouf@uha.fr)
University of Haute Alsace, Mulhouse, France

Abstract.

The aim of this talk is to introduce the concepts of Rota-Baxter and Reynolds operators within the framework of trusses. We also define and discuss dendriform trusses, tridendriform trusses, and NS-trusses as foundational algebraic structures associated with these classes of operators. Furthermore, we extend the notions of Nijenhuis and averaging operators to trusses, investigating their properties and exploring their potential to generate new algebraic structures.

Joint work with T. Chtioui, M. Elhamdadi, S. Mabrouk.

References

[1] T. Brzeziński, *Trusses: Paragons, ideals and modules*, J. Pure Appl. Algebra **224** (2020), 106258.

[2] T. Chtioui, M. Elhamdadi, S. Mabrouk, A. Makhlouf, *Rota-Baxter type operators on trusses and derived structures*, Preprint, arXiv:2504.19293 (2025)