Meadows - On how to divide by zero João Dias¹ and Bruno Dinis¹

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Talk Abstract

Meadows are algebraic structures, similar to rings, but where division by zero is allowed. These structures were introduced by J. Bergstra and his co-authors in a series of papers in the context of Computer Science. The two main classes of meadows are involutive meadows, where the inverse of zero is zero, and common meadows, where the inverse of zero is an element that is absorbent with respect to both the sum and the product. In this talk we give a brief introduction to common meadows and discuss some of their algebraic properties. In particular, we study the problem of enumerating finite common meadows, which is related with concepts that arise in the study of combinatorial structures and in number theory. Some open questions on this topic will also be discussed.

Keywords: Common meadows, unital commutative rings, enumeration of finite structures.

Acknowledgements

This research was supported by national funds through the Fundação para a Ciência e Tecnologia, FCT, under the project UIDB/04674/2020 (https://doi.org/10.54499/UIDB/04674/2020).

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