

Zur IZHAKIAN :

*Abstract.* Tropical mathematics is carried out over idempotent semirings, a weak algebraic structure that allows for describing objects of discrete nature. The lack of additive inverse in semirings restricts the use of basic mathematical notions, which are reintroduced in supertropical semirings. Supertropical semirings are rich enough to permit a systematic development of algebraic theory, including analogs to many important notions and results in classical algebra. Thereby, they provide an algebraic framework for natural representations of matroids and simplicial complexes.