

Singularities in Geometry and Topology in honour of Sabir Gussein-Zade with occasion of his 60th birthday.
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Hyperfields for Tropical Geometry

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SUMMARY

The notion of hyperfield is a straightforward generalization of the notion of field. The difference between these notions is that addition in a hyperfield may be multivalued. Hyperfields with multivalued addition can be obtained from usual fields via factorization or degeneration. Hyperfields provide a natural base for tropical geometry. The degenerations relating objects of the classical algebraic geometry to objects studied by the tropical geometry are induced by degenerations of the ground fields to hyperfields. Hyperfields appear naturally in other contexts and are of general interest.

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