

Singularities in Geometry and Topology in honour of Sabir Gussein-Zade with occasion of his 60<sup>th</sup> birthday.  
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## Arcs, Cords and Felts - six instances of the linearization principle

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### SUMMARY

The talk presents joint work with H. Hauser (see American Journal of Math, 132, 4). We show that a selection of prominent results in singularity theory and differential geometry follow from the *linearization principle* for maps between spaces of formal power series. This is an algebraic refinement of the Rank Theorem proven by Hauser-Mueller generalizing the well-known result that analytic maps between finite dimensional  $\mathbb{C}$ -vector spaces with Jacobian of locally constant rank can locally be linearized by automorphisms of source and target.

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