Singularities in Geometry and Topology in honour of Sabir Gussein-Zade with occasion of his  $60^{th}$  birthday. El Escorial, Madrid, October 10-16<sup>th</sup> 2010

## Singularities of tangent surfaces to Legendre curves and to null curves and their duality

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## SUMMARY

There exists a natural duality between the contact projective three space and the Lagrange-Grassmannian of the symplectic four space with the indefinite conformal structure. Under this duality, the singularities of tangent surfaces to Legendre curves and to null (light-like) curves are classified up to local diffeomorphisms or homeomorphisms. Several applications will be mentioned. This is a joint work with Y.Machida and M.Takahashi.

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