Título: Gromov, Cauchy And Causal Boundaries For Riemannian, Finslerian And Lorentzian M

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Recently, the old notion of causal boundary for a spacetime V has been redefined consistently. The computation of this boundary ?V on any standard conformally stationary spacetime V=R×M, suggests a natural compactification MB associated to any Riemannian metric on M or, more generally, to any Finslerian one. The corresponding boundary ?BM is constructed in terms of Busemann-type functions. Roughly, ?BM represents the set of all the directions in M including both, asymptotic and "finite" (or "incomplete") directions.

This Busemann boundary ?BM is related to two classical boundaries: the Cauchy boundary ?CM and the Gromov boundary ?GM.

The authors' aims are: (1) to study the subtleties of both, the Cauchy boundary for any generalized (possibly non-symmetric) distance and the Gromov compactification for any (possibly incomplete) Finsler manifold, (2) to introduce the new Busemann compactification MB, relating it with the previous two completions, and (3) to give a full description of the causal boundary ?V of any standard conformally stationary spacetime.

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