## Théorie, Univers et Gravitation - TUG



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## Carroll and flat holography

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The theme of asymptotically flat spacetimes has come back recently to the fore, fueled by the discovery of gravitational waves and the growing interest in what flat-space holography could be. In this quest, Carrollian geometry plays a central role. After outlining a synoptic survey of Carrollian geometric structures, I will show how Ricci-flat spacetimes are generally reached as a limit of Einstein geometries and how they are in fact constructed by means of an infinite set of data data defined on the conformal Carrollian boundary that is null infinity, and emerging as the coefficients of the Laurent expansion of the energy-momentum tensor in powers of the cosmological constant. Comparison with the celestial approaches is part of the agenda.

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