

# **At infinity of asymptotically locally complex hyperbolic manifolds.**

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An asymptotically complex hyperbolic manifold is a complete non-compact manifold whose geometry at infinity is modelled on the complex hyperbolic space, the Kähler counterpart of the hyperbolic space. Like its real analogue, such a manifold is by definition endowed with a boundary at infinity, which is a so-called CR manifold. This boundary at infinity corresponds to the conformal boundary of asymptotically hyperbolic manifolds in the analogy. This notion firstly appears as an extrinsic notion.

In this talk, I shall show that this boundary at infinity and its geometric structure can be recovered by purely geometric considerations, highlighting the intrinsic nature of this notion. I will first focus on Kähler examples and then explain how to extend the result in the almost-Hermitian setting.

This result is the almost-complex analogue of a series of result by Bahuaud-Gicquaud-Marsh-Lee from the 2010's in the real hyperbolic realm.