

# Parabolic vector bundles and Lie algebroid connections

D. Alfaya Sánchez; I. Biswas; P. Kumar; A. Singh

## Abstract-

Given a holomorphic Lie algebroid on an  $m$ -pointed connected Riemann surface, we define parabolic Lie algebroid connections on any parabolic vector bundle equipped with parabolic structure over the marked points. An analog of the Atiyah exact sequence for parabolic Lie algebroids is constructed. For any Lie algebroid whose underlying holomorphic vector bundle is stable, we give a complete characterization of all the parabolic vector bundles that admit a parabolic Lie algebroid connection.

**Index Terms-** Parabolic bundle; Lie algebroid connection; Atiyah exact sequence; stable bundle; Fibrado parabólico, conexiones sobre algebroides de Lie, sucesión exacta de Atiyah, fibrado estable.

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