

Ramification curve associated to a rank two vector bundle

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SUMMARY

This is work in progress in collaboration with Simone Marchesi from Campinas University. It is concerned with the classification of algebraic vector bundles on projective spaces. This classification is a central subject in algebraic geometry; its importance has not stop growing since the link with the equations of the atomic physics (called Yang-Mills equations) was clarified by Atiyah, Bott, Drinfeld, Hitchin, ... during the 80s. Our approach, original with regard to classic classifications, consists in studying these rank-two vector bundles as images of line bundles living on a double cover. A ramification locus appears in some cases which we try to determine and to study, this locus (curve) is only determined by the given rank-two vector bundle.

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