ADJUNCTION THEORY: A TOPIC DEAR TO ALDO BIANCOFIORE

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Abstract

A subvariety embedded in an differential variety inherits a differential structure, and the classical adjunction formula compares these two structures. Castelnuovo and Enriques used these ideas to construct the adjunction mapping for projective surfaces, its main property being that the hyperplane sections become canonical curves, which in turn are well understood. The classification of projective surfaces was made possible one century ago by this new tool, among others. Modern adjunction theory starts with the seminal work of Sommese, and has given a new perspective in the classification of projective varieties of any dimension. Aldo Biancofiore has got several important contributions to this topic and eventually to the classification of projective varieties. We will review a few selected points in this story, especially for small codimension varieties.