Elliptic 3-folds in $\mathbb{P}^2$-bundles over surfaces

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Abstract

In this talk we want to study the elliptic fibrations whose total space is a Calabi-Yau variety embedded as an anticanonical divisor in a suitable class of $\mathbb{P}^2$-bundles over a surface. Once we fix the base surface, we will show that the number of such elliptic 3-folds is finite, using only intersection theoretic properties of the base. When the base surface is $\mathbb{P}^2$, we will show that some of these fibrations admit in a very natural way some non-Kodaira fibres.