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Holomorphic dynamical systems whose orbit spaces give new examples of compact complex manifolds

We consider in $\mathbb{C}^n$ a system of m commuting linear ODE ($2m + 1 < n$) given by m commuting matrices $A_1, \ldots, A_m$. Under some generic and arithmetic conditions, the (semi-stable) orbit spaces of the $\mathbb{C}^m \times \mathbb{C}^*$ action generated by the commmuting equations, together with the action of multiplication of scalars in $\mathbb{C}^*$, give compact, complex manifolds that fiber over toric varieties. We indicate the proof that every nonsingular toric variety is obtained this way.

In this talk I will describe joint work with Laurent Meersseman.