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 commuting 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.