Christopher Hacon and James McKernan: Birational geometry and moduli spaces of varieties of general type

The moduli space of stable curves is one of the most heavily studied varieties in algebraic geometry. Its construction uses geometric invariant theory. Unfortunately this does not seem to work in higher dimensions. Â

In the last three decades there has been considerable progress towards constructing analogous moduli spaces for higher dimensional varieties using techniques from the minimal model program. We review recent progress which leads to a complete solution of the corresponding boundedness problem in all dimensions.