

In my talk, an algebro-geometric description of solutions of the classical Yang-Baxter equation (CYBE) will be explained. Namely, I am going to show that any pair (E, A) , where E is an irreducible plane cubic curve and A a coherent torsion free sheaf of Lie algebras (whose generic fiber is a given complex simple Lie algebra) with vanishing cohomology, canonically defines a solution of CYBE. It turns out that at least all elliptic and rational solutions of CYBE arise this way. The developed method will be illustrated by explicit examples. This talk is based on joint works with Lennart Galinat, Thilo Henrich and Alexander Stolin.