

Integrable systems on nilpotent Lie subalgebras via cluster theory

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Let G be a complex semisimple Lie group and $\text{Lie}(G) = \mathfrak{n} \oplus \mathfrak{h} \oplus \mathfrak{n}_-$ be a triangular decomposition. We construct an integrable system on the dual space of \mathfrak{n}_- equipped with the Kirillov-Kostant-Souriau Poisson structure, using a Poisson-cluster seed for G/B (equipped with the standard Poisson structure) arising from symmetric Poisson CGL extension. This is joint work in progress with Yu Li and Jiang-Hua Lu.